Stakeholder Management and Sustainable Development

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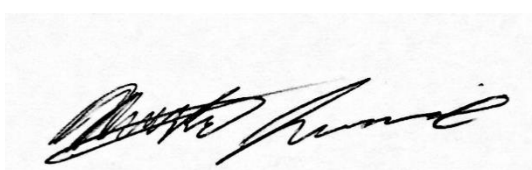
Supervisor Signature: 

Abstract

Anthropogenic activities are causing pronounced climatic changes affecting economies of scale. Engaging stakeholders in sustainable development initiatives can reduce these impacts. Therefore, there is currently a greater need for more community engagement in all sectors, including the public domain, to contribute collective efforts to achieve successful sustainability objectives.

Stakeholder management is a multidisciplinary process, and any approach is dependent on the stakeholder manager's knowledge and understanding of the targeted population. This portfolio explores the best practices, as evidenced by my previous work and volunteer experiences, about stakeholder engagement within the field of sustainability in specific contexts – government, industry, and environmental non-governmental organizations. An in-depth comparative analysis of these cases is the method used to develop a framework to encompass the logical connection to sustainable development within the field of environment studies.

The framework summarizes the categories for the various objective and stakeholder types, the different social contexts, and the stakeholder approach types that can be used to direct the path towards engaging individuals or groups, in any given initiative or campaign, that supports sustainable development.

Foreword

This major portfolio is being submitted to partially fulfill M.E.S. Degree requirements. The case studies discussed in the analysis of this major portfolio directly relate to my area of concentration, components, and fulfills some of the objectives outlined in my Plan of Study. The outcomes and implications presented contribute to my understanding of the principles, guidelines, processes, and techniques that are required to implement sustainable initiatives (e.g. renewable energy) in either the private or public sector (Learning Objective 1.2.).

This portfolio also allows me to complete Learning Objective 1a.1. to better understand the relationship between the social and economic organizational structures that shape societies and the behaviours that influence consumers so that barriers towards sustainable development can be overcome. Also, the portfolio is aligned with Learning Objective 2.3., as it allows me to become familiar with the alternative methods that are only now being recognized to deliver change at local levels. Moreover, finally I have been able to learn how businesses, communities, institutions, and ENGOs can be agents of change to sustain local economies and facilitate sustainable development (Learning Objective 3.2.) as outlined in my Plan of Study.

Acknowledgements

I would like to thank my family, friends, colleagues, and co-workers for their support and encouragement throughout all of my ambitious endeavours. I would also like to acknowledge and thank my Supervisor Marko Jovanovic, my Advisor Ravi De Costa, my Professor Felipe Montoya, and my FES Dean Noël Sturgeon for their advice and support throughout the MES program.

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1.0 Introduction

Environmental sustainability is an increasingly important part of the 21st century social, economic and political systems, as it offers a means to offset the negative aspects of global development. However, achieving sustainability involves trade-offs between competing interests (Hardin, 1968). Thus, it is difficult to implement, without a strong understanding of how to motivate diverse stakeholders to contribute to the sustainability agenda. Some examples of these sustainability initiatives are fundraising, participating, and educating.

In Freeman's (1984) book, *Strategic Management: A Stakeholder Perspective,* a stakeholder is considered to be – "any group or individual who can affect, or is affected by the achievement of the organization's objectives" (pp. 46). Since this time, the concept of "stakeholders" is recognized as an integral part of achieving business objectives. A manager's decision-making process to reach their strategic plan objectives can lead to failure when it ignores stakeholder needs, perspectives, and interests. By not paying attention to those who have a stake in an organization (owners, suppliers, employees, and customers), and having no concepts which can be applied to manage these relationships, managers risk the failure of their operations (strikes, work slowdowns) (Freeman, 1984).

Consequently, to achieve success, managers need to undergo a *conceptual shift* to satisfy the owners, employees and their unions, suppliers, and customers (Freeman, 1984) simultaneously. As a result, for many years, this stakeholder theory has been a popular decision-making tool used to describe the management environment, but it has not yet reached full theoretical status (Mitchell, Agle & Wood, 1997). For this reason, I have chosen to focus my research on the best practices pertaining to stakeholder engagement within the field of sustainability, drawn from my observations and experiences in specific stakeholder management roles for different sustainable development goals.

Therefore, to execute this research I have chosen to use the Three Pillar Approach to Sustainability as my primary model of sustainability, which integrates the social, economic, and ecological approaches (United Nations General Assembly, 2005). In so doing, I have incorporated evidence generated from a variety of my coursework, co-op placements, internships, volunteer activities, and work experience in four sustainability organizations:

1) **Packaging Consortium** (PAC),
2) **Toronto Renewable Energy Cooperative** (TREC),
1) **World Wildlife Fund – Canada** (WWF-Canada),
2) **Las Nubes Student Association** (LNSA) – York University,

And, in one government department:

(5) **Environment and Climate Change Canada** (ECCC).

2.0. Methodology

RESEARCH QUESTION:

Engaging stakeholders in sustainability initiatives requires a diverse set of strategies and approaches to achieve the multipolar engagement objectives. My research will aim to answer:

"What are the essential elements needed for a stakeholder manager to successfully engage different stakeholder types to advance sustainable development objectives?"

2.1 Literature Review:

The term sustainable development has many different meanings. Nonetheless, the main feature of the term can be understood as an active approach to combining the growing concerns about various environmental issues within the socio-economic issues of development. The general model to achieve this consists of the three interconnected sectors of environment, society, and economy (United Nations General Assembly, 2005). However, the challenges that have arisen in combining these issues towards environmental protection and justice have become the core focus as society faces the sustainability challenges of the future. As a result, the importance of stakeholder engagement for governments and businesses engaging in societal reform has never been greater. Therefore, stakeholder engagement is needed to successfully raise the sustainability issue in public discourse, achieve successful mobilization of the media and public opinion, and to ensure coalitions are built to link researchers, popular protest and direct action groups (Hopwood, Mellor & O'Brien, 2005).

Furthermore, we now have evidence of the consequences of exclusionary institutional planning and policy in situations where stakeholders were not engaged in the process (Kibreab, 1999), which serves as a cautionary tale to those implementing sustainable development in either societal or corporate contexts. Relatedly, when looking at the diversity of the various groups necessary for advancing individual sustainable development activities or even advancing a wider social program, the challenge becomes one of efficient and effective mobilization (Mallery, Ganacha, et al., 2012). In other words, it is how we can get to the highest mobilization level of our complex group of stakeholders to support our sustainable development initiatives at the lowest cost.

To determine how we can get to this level of the highest mobilization possible we turn to the business discipline of stakeholder management, which incorporates and integrates elements of public relations, client relationship management, negotiations, and alternative dispute resolution (i.e. mediation, facilitation, and engagement). In so doing, this business discipline allows us to identify, analyze, categorize and strategically engage key stakeholder groups in sharing key information, creating a mutual understanding or persuade them into action (Kaner, Watts & Frison., 2008).

Stakeholder management in general, because of its background in traditional public relations, prioritizes a focus on audience-oriented communication approaches. These methods ensure that every attempt to engage a stakeholder group has a message appropriately tailored to it for maximum salience and is communicated through the relevant mediums for that group (Emery, Fey & Flora, 2006; Born 2012). The implication of this is that the more focused the strategies and the tactics are towards the particular stakeholder(s), the more relevant the messages will be to the targeted stakeholder(s), and consequently the more likely they will be accepted (Park & Lee, 2016).

Therefore, the cost issue (efficiency) and information provision or mobilization level (effectiveness) are critical areas of focus because every additional stakeholder will require further modification to the media or the message. As a result, this directly affects both the efficiency and the effectiveness of the stakeholder management approach (Emery, Fey & Flora, 2006; Born 2012). In light of this, the role then of an effective stakeholder management tool is to increase the efficiency and (or) effectiveness of the practitioner in prioritizing and directing their resources to engage the key stakeholders in achieving their strategic objectives (Schwalbe, 2010). Thus, in this context, stakeholder management enables and advances sustainable development.

A review of the literature on stakeholder management, specifically the operational tools that are utilized by diverse practitioners to promote their objectives, tend to be either generic broad-based models or are focused on their areas of concern (e.g. government-to-business or business-to-business relations, health policy). Examples of focused area models include those for management consultants (Applegate, 2008), international development organizations (Montgomery, 1996), and municipal governments (Snel & Ali, 1999).

However, neither of these cases is optimized specifically for sustainable development. There is currently no existing framework found in a review of the literature that enables stakeholder management to be both broad to include different the stakeholder types and management effects and optimized for advancing sustainable development. Even though the sustainable development field has some specialized stakeholder management tools, these alone are inadequate to achieve engagement of all stakeholder groups.

The World Wildlife Fund (WWF) Cross-Cutting Tool: Stakeholder Analysis (Golder & Gawler, 2005) is the most helpful. However, this is more of an analytic model for sustainable development projects from the perspective of a non-government organization (NGO), rather than a more far-reaching framework that could be applied by any sustainable development practitioner at any level (project, program, enterprise, or public policy).

Similarly, operational stakeholder analyses conducted for major sustainable development projects are highly focused on project-specific considerations in their categorization and assessment of relevant stakeholders and issues. For example, the European Union`s Green Solar Cities project (Bedir & Hasselaar 2008). As a result, these cases cannot be easily generalized for use in a wider framework. I aim to contribute to bridging this gap by creating a high-level, comprehensive, yet specialized stakeholder management framework. I would hope that his framework, based on my experiences, would be beneficial to stakeholder managers, and the existing literature on sustainable development and stakeholder management.

2.2. Methodology

My M.E.S. Portfolio uses a case study approach with selection criteria based on a purposive sampling method that presupposes existing stakeholder management and sustainable development theoretical paradigms. As stated by King, Koehane, and Verba (1994) in their book *Designing Social Inquiry: Scientific Inference in Qualitative Research,* the logic of good qualitative and good quantitative research designs is not profoundly different. Even though, the authors recognize that qualitative and quantitative methods focus on addressing different types of questions, both types of research can be systematic and scientifically rigorous. Therefore, as the authors argue that qualitative research should be elevated in rigour by adapting certain quantitative concepts, I have decided to incorporate their strict terminology and design logic in my qualitative research design. The use of this particular language has allowed my research to cover a broad range of approaches that do not rely on numerical measurements, but instead focuses on a small number of cases while providing a comprehensive account through an in-depth analysis of historical materials (King, Keohane, and Verba, 1994).

The research presented in this Portfolio is analytical and seeks to evaluate alternative explanations through a process of valid causal inference (King, Keohane, and Verba, 1994). Thus, I have chosen to focus on locating the variations that exist within a stakeholder manager's targeted population. This population is framed by specific social environments limited to the goals of sustainable development, will allow me to map the different mechanics that produce successful stakeholder management strategies for these distinct environments (King, Keohane & Verba, 1994).

Accordingly, this qualitative case study approach allows me to identify and analyze my observed best practices, to build a framework consisting of the optimal strategies that contributed to meeting the needs of the sustainable development organizations I have volunteered and worked for in my role of stakeholder manager. With this intention, the mechanism includes an examination and analysis of information gathered through field observations and content analysis presented in this format of a Master in Environmental Studies (MES) Portfolio.

My Portfolio consists of various examples of evidence collected from my research, work, and volunteer experiences (academic papers, assignments, work reports, and multi-media presentations) presented as individual cases. Each case shows evidence of approaches used for strategically informing and influencing stakeholder opinions (stakeholder management) in the field of sustainable development. An analysis of this evidence and discussion of my observations then follows, which allowed me to develop a framework of stakeholder management tailored for the diverse stakeholders involved in sustainable development.

Furthermore, I have determined that this case study approach is the optimal method for analyzing the subtle differences, including the underlying structures, for the application of stakeholder management within the field of sustainable development. This approach would provide the rich quality of information required to construct an operational framework for stakeholder management within the area of sustainable development. The case study selection criterion follows a difference of variable approach, whereby the independent variables (stakeholder types) intentionally selected with different typologies to allow the analysis of the various outcomes of the dependent variables (stakeholder management strategies).

The cases I have presented in my portfolio cover a full spectrum of the standard stakeholder groups/social environments found in the sustainable development field, for examples, industry, national and international civil society organizations, and various levels of government stakeholder social environments. The breadth of issues addressed in these cases allows my Portfolio to contribute to a method of operational practice in the field of stakeholder management for sustainable development. Thus, provides a valuable tool for sustainable development advocates and professionals.

My MES portfolio utilizes a descriptive, cross-sectional, exploratory case study research design. This model design accounts for the control for variation over time regarding the relevance of cases and maturation issues (such as changing circumstances of cases). Hence, these control for variation ensures that all cases selected within the span of two years be analyzed at one point in time (observational cross-sectional case design) (King, Keohane & Verba, 1994). This research design also accounts for the control for subjectivity, as these cases selected were from my professional experience and so, the evidence has been consistently collected (descriptive cases design) environments (King, Keohane & Verba, 1994).

Finally, as mentioned previously, this research design seeks to analyze instances across these cases to develop a novel, stakeholder management framework. To achieve this result, it will generate posterior conclusions concerning the dependent variable rather than starting from *a priori* of assumptions because it is an exploratory rather than confirmatory study.

To ensure consistency and make comparable analysis between the cases easier, all of my case studies have been structured and presented for analysis according to the following format:

SECTION A: Case Background

The contents described in this section include the following:

Description of the community/ organization (size, region and population), and my project work (timeline, expected deliverables),

- My role in the job or volunteer position and how it contributed to positive stakeholder engagement outcomes and sustainable development results in the community,
- The organization's mission/mandate contributed to sustainable development, and the benefits of the project or initiative.

SECTION B: Challenges and Accomplishments

The contents described in this section include a discussion of the following:

- Challenges associated with the position that had to be overcome,
- How the initiative I was involved with was received and supported by the community,
- Other individuals and/or groups involved, and their impact on the outcome of the initiative or work,
- Limitations within the community that became apparent, and was overcome to support positive social and environmental initiatives.

<u>SECTION C: Observations and Analysis</u>

The contents described in this section include a discussion of the following:

- Reflection on the stakeholder engagement best practices observed,
- How the case contributes to my stakeholder engagement outcomes framework proposed.

The four case studies presented in my M.E.S Portfolio are as listed below:

(1) **The Las Nubes Student Association** (LNSA) case study provides specific, detailed analysis of organizational stakeholder engagement practices on a time-series of several events over a six-month period, to outline the depth and breadth of practices involved in engaging stakeholders in a sustainable initiative within a large educational institution.

(2) **Toronto Renewable Energy Cooperative** (TREC) case study two TREC projects: (a) SolarShare; and, (b) Metcalf and York University's – Community Conservation Challenge, and a third project from my volunteer research fieldwork for **World Wildlife Fund – Canada** (WWF-Canada). These experiences (community events, research and analysis) provide a wider analysis of the best engagement practices for engaging Canadian communities, municipalities, and industry to implement sustainable initiatives through projects in renewable energy.

(3) My experience at the federal government organization, **Environment and Climate Change Canada** (ECCC) provided me the knowledge and expertise of effective methods for engaging internal stakeholders inside large organizational contexts. Furthermore, the policy, program and process management practices used by ECCC provided me with the technical knowledge needed to compare the different types of active engagement strategies.

(4) **The Packaging Consortium** (PAC) presents an analysis of how inclusiveness in the stakeholder engagement process can result in effective, sustainable development initiatives.

3.0. Case 1: Las Nubes Student Association

Position Held (Volunteer): ***President***

3.1. SECTION A: Case Background

After participating in the International Field Experience in Costa Rica, I took the opportunity to be the President of the Las Nubes Student Association (LNSA) at York University during September 2013 – April 2014. The late Dr. Howard Daugherty first started the LNSA with a passion for sustainable development and neo-tropical ecosystems that were deep-rooted at York (YFile, 2010). However, since his passing, the LNSA was not very active.

When I took over the LNSA, as its President in 2013, my original goal was to revive simply the image of the LNSA and collect donations through a few fundraising activities. However, eventually, I saw it as an opportunity to promote fair-trade and organic products, recyclable and biodegradable packaging. As well as, become a type of interactive learning space to engage members of the York community in sustainability issues, and promote the ongoing work at York's Las Nubes Reserve in Costa Rica.

Given my passion for sustainability and people, I wanted to create a space where students, faculty, and staff could come together and discuss the importance of sustainability, contribute their ideas, and engage in sustainable initiatives to make our society a less destructive one. York University, created the optimal space for this since it is the third largest university in Canada, located in Toronto, Ontario with about 53,000+ students, 7,000+ faculty and staff, and over 250,000+ alumni worldwide (York University, n.d.).

While I was President of the LNSA, its mission was:

"To support tropical conservation, protect ecosystem integrity, support local Costa Rican communities, and student environmental initiatives within and beyond the York University community. The LNSA believes that there must be a multidisciplinary approach to bring about positive environmental change and awareness within the academic community. Therefore, through student leaders and environmental ambassadors, geography would not be a limitation in the collaboration of conservation efforts between Costa Rica and Canada.

I led and managed over sixty plus volunteer members of the LNSA within the York University campus. During this time, I chose to develop a plan and fulfill the following responsibilities:

- Recruit, motivate and train, supervise, and volunteers for daily events (1 – 3 events per day) events occurring at various locations through the campus to ensure effective teamwork, quality and organizational performance, continuous learning and encourage innovation among students.

- Supervise day-to-day operations of all volunteers including scheduling, assigning and reviewing of work. Authorize and coordinate time off and extra volunteer work requests. Monitor and evaluate volunteer performance, hear complaints and make recommendations for action when necessary.

- Provide input and administer budgets, to ensure that expenditures are controlled and maintained within limitations. Research products, collect quotes, and select the most cost-effective and sustainable inventory supplies, as well as negotiate costs for catering services for large events.

- Contribute to the changes in management approaches to improve efficiency and broaden stakeholder engagement (internal and external) opportunities.

- Setup and maintain an active LNSA presence on social media (Instagram, Facebook) providing updates, volunteer accomplishments, etc.

- Lead the LNSA team to create a plan and activity schedule, according to the policy and procedures of York University, Faculty of Environment Studies (FES), and other intra-university offices and organizations (Food Services, University Bookstore, Student Community & Leadership Development, York Library, etc.).

- Contribute to, and liaise with working groups (e.g. Institute for Research and Innovation Sustainability (IRIS), Regenesis at York, Canadian Anthropology Society 2014 Conference Annual (CASCA 2014), committees, and external groups (e.g. Green Mountain Coffee Roasters (GMCR) for Timothy's Costa Rican grown coffee.

- Monitor the LNSA's work output and ensure that results are achievable within specified time settings, resource allocation, and budget constraints initiatives.

- Plan, schedule, and chair LNSA small (3-20 people), and large (20 – 100 people) meetings and events. Develop marketing strategies and implementing changes as needed to meet the goals of the LNSA.

- Respond to challenging situations, donor suggestions, and internal conflicts that arose while leading a quickly developing LNSA student organization.

- Maintain inventory of items needed for fundraising (chocolate, coffee), research and source products from sustainable businesses to use at events.

- Report and communicate updates of LNSA's activities and goals to the Dean of FES.

- Ensure up-to-date information archives were up-to-date and transferred to the new Executive Team.

The first two months of September and October 2013, were used to re-establish the LNSA within York's administration and develop a plan to host fundraising activities on a weekly basis (Mondays – Thursdays) during a set time. I also used the time during these months to establish a simple strategic plan and working schedule, to allow the LNSA to participate in inter-organizational activities, with the intention to engage further other members of the York community. Once this was developed and administrative correspondence and procedures were in place. I then used the months of November 2013 – March 2014 to promote the LNSA through the exchange of Camino chocolates and Las Nubes coffee for donations, and information presentation sessions. These activities enabled me to recruit more members and engage some internal and external stakeholders in other sustainability initiatives.

3.2. SECTION B: Challenges and Accomplishments

Setting up the LNSA within the York community created many expected and unexpected challenges. However, I was able to overcome these challenges in a very short amount of time to create positive environmental change and engage others at York to participate in sustainable initiatives.

The first challenge I faced was related to the registration and setup of the LNSA as there was no previous structure, resource database, members list, or maintained networks among the different intra-offices and Faculties within York. In fact, even though I had been a student of FES for almost four years, I barely knew what the LNSA had done in the past. The second challenge involved the process of getting access to space, authorizations, and permits from York's authorities for our fundraising events as multiple events were occurring – sometimes on a daily basis. The third challenge was related to the recruitment of student volunteers to participate in LNSA initiatives and to promote environmental sustainability throughout the York community. Moreover, the fourth challenge I experienced dealt with explaining the purpose of the LNSA's activities, as people would draw their conclusions without fully knowing 'who we are, what we are, and why we do what we do.' This uncertainty made the process of engaging members of the York community more difficult as I had to develop methods to provide information to convince members of the York community to take action in a sustainable initiative.

I began work with the LNSA in late September 2014 with a committed three new members on the 2013-2014 elected Executive Team, and with hardly anyone in the York community having any knowledge of the LNSA. After volunteers were confident after their training and other individuals joined, the LNSA grew to a dedicated team of over sixty members, and other participants who volunteered their time and efforts, and donated funds at LNSA's fundraising events and activities throughout the campus.

When I started the LNSA, I had a difficult time scheduling events especially since there were a large number of volunteers with actively changing schedules on a daily basis. As a result, this affected my ability to lead volunteers. However, eventually, I overcame this challenge because I was able to lead and coordinate everyone using a combination of social media (Facebook Messenger), emails, text messages, phone calls, and in-person meetings. Furthermore, I did not know where to purchase sustainable products, obtain Las Nubes coffee beans for fundraising, how to organize events throughout the York campus, or how to manage a large group of volunteers with varying schedules and very short notice unavailability.

However, I was able to learn quickly the methods to motivate and lead volunteers, communicate effectively, manage conflicts, and establish relationships with other organizations and faculties throughout the campus, as well as, other agencies and sustainable businesses outside of York. This technique successfully accelerated the LNSA's sustainable engagement activities because I participated in many in-person meetings that occurred very frequently throughout the time I led the LNSA.

Before September 2013, the LNSA lacked a strong presence to successfully engage members of York's community in sustainability initiatives. However, due to the LNSA's daily presence through many different fundraising activities, I was able to end the 2013-2014 academic year on a high note. The LNSA team was invited to present highlights of "who we are, what we do, and why we do what we do to" by providing service and information at its largest event. This fundraising event was a significant achievement as the LNSA team increased interest through participation in the 2014 Canadian Anthropology Society (CASCA) Conference, with an attendance of over 550 members from across Canada on site at York University.

In the 2013 – 2014 academic year, the LNSA was able to raise a goal of $5,000 towards local community initiatives within Costa Rica. The LNSA initiative within the York community was well accepted as the student organization had grown significantly in a span of six months, and I continued to receive unsolicited requests for the LNSA to partake in community engagement events within the York University campus and from stakeholders in Coast Rica. Students were also inquiring about volunteering opportunities without me having to host recruitment meetings, in comparison to the ones I had to conduct earlier in September 2013.

3.3. Section C: Observations and Analysis

My analysis of the LNSA case shows me that the strategic use of social media in combination with well planned, direct engagement activities as the main features of a stakeholder management campaign can help a build an active community. This community can then raise awareness of the project and change previous perceptions concerning the wider social issues surrounding the environment and sustainable development. Additionally, adopting these set of strategies can even catalyze individuals to action by raising funds for the project. In turn, through more community engagement, the LNSA increased the learning value of the Faculty of Environmental Studies (FES) program of study by promoting its Las Nubes Project. While contributing to positive environmental actions at York University and within the local communities that derive benefit from the Las Nubes conservation area.

I found it particularly interesting to conduct this kind of stakeholder management role within a community scale such as York University. The semi-official support as a student-led association I encountered at the start of my work with the LNSA strengthened in a short time by my pivotal role in re-establishing relationships between previously existing intra-organizational structures. The engagement activities with local businesses, individual generic students, individual FES students, and University Administration also provided the evidence needed for me to create new relationships with previously existing structures (groups within York University), even though the individual representatives (new staff member) were different. Both of these strategies combined allowed me to achieve a combination of large types of objectives.

Unlike previous stakeholder management initiatives I led, which I discuss later, I felt that within the LNSA all the different sustainable development goals I was trying to achieve, while complimentary, were still distinct. For example, our canvassing and advertising efforts for monetary donations towards the LNSA's mission were not directly dependent on the public information campaign. Even though my primary focus as a stakeholder manager was to collect the most donations while promoting sustainability, I treated both engagement methods independently. Namely, it was just as important to open up a public dialogue on sustainable development issues at York University to inform members about the FES Las Nubes Project, which was not linked to increasing the amount of money collected but was instead treated as its own good. The community perceived the LNSA as a provider of a service (space for sustainability discussions) and as a provider of a product (coffee, tea, chocolates).

Identifying this distinction through this type of analysis taught me that a stakeholder manager could design and use a combination of strategies to engage a variety of stakeholder types in sustainability conversations. These stakeholders would include both individuals and representatives of organizations who become involved through a different set of engagement activities. Once these activities are developed and specifically tailored to the preferences of the different groups within the population (social context), the stakeholder manager can achieve very different but related objectives within the realm of the issues being targeted, in this case, sustainable development initiatives.

Another lesson that I learnt from this experience was that stakeholder management efforts take a considerable amount of resources to maintain the community's engagement and interests around the specific objectives the stakeholder manager is trying to achieve. The engagement activity itself takes a variety of different resources and is easier to do it in a controlled environment, especially when conflicts arise relating to competing interests for similar resources (booking space for LNSA events). It is important for a stakeholder manager to know that there are reserved resources to use during times of unforeseen challenges such as the support of instrumental senior officials willing to step in and demonstrate authority when needed without being told to so.

4.0. Case 2: Toronto Renewable Energy Cooperative and World Wildlife Fund – Canada.

4.1. SECTION A: Case Background

TREC – SolarShare (Community Outreach Coordinator)

As of April 2014, I had just begun my first term as a community outreach coordinator for the Toronto Renewable Energy Cooperative's (TREC) project, SolarShare, located in downtown Toronto, Ontario, Canada. TREC is an incorporated, not-for-profit organization that, at the time, had been operating for over 14 years to develop co-operatively owned projects in Ontario and educate its residents about renewable energy conservation and the community power model. TREC is the project incubator of SolarShare, which was a relatively new project (under five years) operating in Ontario. I was the second community outreach coordinator hired to work throughout the summer months. This position became available due to the nature and buzz of sustainability-related community events that tend to occur during the warmer temperatures such as trade shows, farmers markets, community festivals, and interest group meetings. These sustainability events took place within the boundaries of the City of Toronto, and the four regional municipalities that surround it: Durham, Halton, Peel, and York, also known as the Greater Toronto Region (GTA).

The SolarShare community outreach coordinator (summer student) position had a set timeline for the start of activities scheduled to run from April to the end of August 2014. The core of SolarShare's mission is to be Canada's leading renewable energy co-op by making it easier for investors to earn a notable return while directly contributing to efforts that are good for the planet. SolarShare develops commercial-scale solar power installations on the rooftops of already existing buildings throughout the province of Ontario so that any of its residents can invest in them (SolarShare, n.d.). SolarShare's primary goal is to be the agent of change in building as many solar projects to power communities using energy generated from solar projects in Ontario. The coop finances, constructs, tests and operate industrial sized solar rooftop projects on pre-existing buildings. Once these projects are operational and producing electricity to power the grid, then it becomes available for public investment through the sale of solar bonds.

During my work for SolarShare, I sold Solarbonds to the public for a minimum purchase of $1000. Once bought, these bonds were then on hold for five years. This five-year period was the time needed for the Solarbond to reach maturity, and after that, the bondholder could choose to redeem their principal or reinvest under the new terms. During this maturation, the bondholder was transferred semi-annual interest payments through direct deposit into their bank accounts each year in the months of June and December. Individuals, families or businesses that choose to invest in SolarShare have 100% of their funds used to finance directly solar projects that are already producing stable revenue (SolarShare, n.d.). When I began working for TREC, SolarShare had just over 600 members, and anyone in Ontario interested in investments or sustainable development was a potential stakeholder. The 'green investing' option was available for people to benefit financially from solar power while helping to end society’s reliance on dirty energy sources.

As a Community Outreach Coordinator for SolarShare, I had to work to engage the public to contribute to SolarShare’s goal of raising $10 million in Solarbonds. However, in April 2015, the coop had raised a total of just under $5 million within its short time of operations (under five years). As SolarShare’s Community Outreach Coordinator for the summer, I had to fulfill the following roles:

- Assist the Community Investment and Marketing Manager in developing SolarShare's strategy to market and sell solar energy bonds to residents of Ontario through in-person (individual or group) public speaking information presentations.

- Actively engage and inform residents through media and social media (Instagram, Twitter, and Facebook) platforms. In addition, contribute to the development of written and visual content for these media.

- Seek public speaking opportunities to present the solar bond opportunity to Ontario residents and share SolarShare's story to relevant audiences to encourage citizen participation in renewable energy projects.

- Recruit, train and lead volunteer "SolarShare Ambassadors" to support the execution of the SolarShare's overall goal and mission.

- Plan, coordinate and attend events throughout Toronto and the GTA to promote educate, inform and encourage citizen participation in solar energy and social finance sector.

- Follow up with SolarShare's members to thank and encourage them to participate in SolarShare's renewable energy projects and spread the word by encouraging their friends, families, and others in their communities to invest in clean, renewable energy with attractive returns.

I chose to use the first month of my term to plan the structure and execution of the direct engagement activities at events throughout Toronto and the GTA. I was able to manage my schedule to be able to attend numerous events (trade shows, farmers markets, community environmental events), conduct volunteer training sessions, and undergo my training in the social finance sector specific to SolarShare's operations. My primary objective was to engage as many Ontario residents as possible given the short time constraints. Due to SolarShare's opportunity for any resident of Ontario to invest, as a stakeholder manager, I was not limited to adults who understood the benefits of investments themselves, but it created an opportunity for me to target parents to invest in Solarbonds for their child.

As a result, I was conducting hundreds of in-person educational and information exchanges about climate change, solar energy, polluting fossil fuels, including its negative impacts on future generations, and the 5% per year return on investment (ROI) from the purchase of a solar bond. I was also conducting direct engagement group consultations to engage the broader community to invest in SolarShare's initiatives, which were in line with Ontario's provincial legislation for renewable energy known as the Green Energy Act (GEA), 2009 (Queen's Printer for Ontario, 2012-16). As a stakeholder manager, this information transfer was important to as a communication tool using relevant and numerous marketing materials – including a solar panel display piece to spark discussion at direct engagement events. It was also beneficial for me to have knowledge and understanding of social media to use as a medium for continuously engaging the public through posted updates about SolarShare's ongoing events and activities, and global communication updates relevant to the solar industry.

As of September 2014, I had been a Graduate Assistant (GA) for the research project between York University and TREC from Community Power to Community Conservation, which has sponsorship from the Metcalf Foundation. This research study started with the expectation to build, execute and measure the effectiveness of a community-based conservation program among individuals who were interested in energy sustainability and improving energy conservation.

Thus, the goal of the project was to evaluate the uptake of conservation programs by a captive audience that is interested in sustainable energy systems, beyond their initial participation in already existing investments in renewable energy co-operatives. The final goal of the study was to develop a Community Conservation Challenge (CCC), which would be a resource that available for use among other organizations in Ontario who are trying to improve energy awareness and encourage greater energy conservation activities in society.

All participants in this CCC project were co-op members that self-identified as willing participants through their response by an initial e-mail and newsletter that sought to recruit SolarShare members. Of the members that elected to participate, they were placed in a separate group under TREC for all research related communications. Participants were asked about their conservation activities at home and to describe a general description of their energy consumption. After the collection of these results, members were then invited to explore a variety of energy conservation options that were available to them.

Members were then encouraged to participate in the household program options provided by the province of Ontario to reduce their energy consumption, and if they chose to adopt any of these, then they were kindly asked to record their successes and share their experiences through TREC's online forum. If they opted to implement any of these options at home, their learning contributions to forum discussions were used to help other participants in the group understand the process, challenges, and outcomes they should expect if they decided to participate in these provincial energy programs. Examples of some of these energy programs include Save on Energy Ontario, Fridge and Freezer Pickup, Peak Saver Program, Home Reno Rebate, Powershift Program, Enbridge Home Energy Loan Program, Heating and Cooling Incentive, and Energy Savings Kit.

This online discussion was also necessary, to ensure collaborative conservation efforts through a practice of skills sharing and knowledge exchange to build an active community around energy conservation. If successful, individual members of the community may also have experienced direct monetary gains through a reduction in their energy use. As well as, gain more opportunities for social interaction, education and skills development. In my GA position with York University, I was appointed the main facilitator of this program. Therefore, I had to fulfill the following roles:

- Create an initial e-mail inviting SolarShare and ZooShare (community bio-gas energy investing) members to participate, along with a link to an online survey that will confirm their participation,

- Facilitate conversation in the online forum and remind participants to provide feedback,

- Handle inquiries from forum participants regarding the available Ontario energy programs listed on the forum site and engage participants in discussing the challenges and outcomes of their own experiences,

- Send a final survey to online forum participants and collect data to create a written report for TREC.

This research study had a timeline of just over ten months, after which I reported observations to TREC, who informed the Metcalf Foundation. If the CCC program were to be successful in encouraging people to adopt any of the available programs in energy conservation and energy efficiency for a captive group, then TREC and York University's experiences would be available for sharing with other co-operatives. The initial communication to SolarShare members was during the end of September 2014.

WWF Canada – (Renewable Energy and Stakeholder Engagement Researcher)

From May – October 2015, I was a volunteer Stakeholder Engagement researcher for the World Wildlife Fund-Canada (WWF-Canada). WWF is striving to put Canada on the path towards 100% renewable energy by 2050. According to WWF's Energy Report (WWF-Canada, 2011a), there is an increased need for investment in the world's renewable energy potential. The report proposes changing the way that society moves people and goods by investing in areas such as better transit, building walkable and bike-able cities, and switching to electric vehicles.

WWF teamed up with researchers at the Waterloo Institute for Sustainable Energy (WISE) to help in this shift to renewable energy by launching a project to map the renewable energy potential across Canada, and create the first “Renewable Energy Opportunity Map” (WWF-Canada, 2011b). This initiative is important to achieve sustainable development goals mainly because renewable energy is highly considered to have enormous potential in Canada but there is not sufficient knowledge that exists to show its ‘realizable’ potential when compared to energy sourced from fossil fuels.

Therefore, this research project would serve to address the comparative disadvantage of renewable energy technologies, and prepare its audience with the knowledge needed to inform and influence public policy and community development in Canada. The expectation is that both public and expert users would be the key end-users of this map since renewable energy must be economically attractive to the broad voting base in order to effectively engage and influence the public, which is the larger voting base in order to affect positive political leadership.

The project’s main goal would be to map hard data to show how much reliable sources of renewable energy can be accessible and used in Canada.

The main purpose of this research is to review global best practices in communicating the renewable energy potential to the public and identify those metrics that are relevant to the public (economic potential, environmental benefits).

As a Renewable Energy Researcher for WWF-Canada, I had to fulfilling the following:

- Review the global best practices used when communicating the renewable energy potential to the public, and identify those metrics that are important to the public (i.e. economic potential, environmental benefits, etc.).
- Prepare a report summarizing the review of global best practices in communicating renewable energy potential.
- Present key findings and recommendations to all staff.

4.2. SECTION B: Challenges and Accomplishments

TREC – SolarShare (Community Outreach Coordinator)

My experience involved a sixteen-week summer term from April to August 2015. Due to my previous experience in stakeholder management for the LNSA at York University, I was able to learn quickly about SolarShare and inform attendees at the 2014 Toronto Green Living Show about SolarShare and the opportunity to support green energy infrastructure in the Ontario through investments to earn a financial return.

I first found that my first interactions with people, for example at a farmers market, would be very different when I had a solar panel as a display at SolarShare's booth. The individuals that would pass by would begin by asking questions about the installation of a collection of solar panels on their home rooftops, or if they lived in an apartment building, they hesitated to get involved with SolarShare's projects. In both of these instances, I found that depending on the types of marketing materials being used to engage people, whether a solar panel display or not, caused the organization's message to be misinterpreted. This change in the public perspective of what the stakeholder manager was trying to achieve, in turn, made my job as a stakeholder manager more tedious at times.

The original initial discussion in most of my direct engagement cases should have been one where I would inform people about SolarShare and its 'green investments.' However, since I had to communicate this information in financial investing terms, many people confused the organization's sustainable development initiatives with being the same as a banking institution. Therefore, I had first to educate people about the issue of anthropogenic climate change and the effects of continued use of non-renewable energy sources on our planet (air quality, intensified storms, and weather changes). Once they understood this, then I could explain how SolarShare's investment opportunities were different from a banking institution and then inform them of the proven benefits of community-owned renewable energy initiatives in European countries. Additionally, I included in my explanations the value for future generations if they invest in SolarShare's solar power projects now. I also had to educate and inform people to convince them to invest in Solarbonds. By explaining the importance of how the Green Energy Act (2009) supports and allows renewable energy initiatives to operate in Ontario.

It was easier to demonstrate exactly what SolarShare was with visual materials (solar panel, banners) and quantitative facts about the energy generated in real time from all of its solar projects combined. As a stakeholder manager, I noticed this form of communication was one of the major challenges I encountered while communicating SolarShare's investment opportunities, people had to see visually the 'what' they were to be investing. At other outdoor events, however, demonstrating this was a bit tricky as visual materials used were not always appropriate due to the nature of the weather and travel to the site limitations. However, when people saw a large solar panel at events, they would associate the SolarShare with being similar to a solar installation company that sold solar panels to the public. Even though this was not the case, I realized that people tend to conclude what is familiar to them since it is within a context that they can understand.

I also noticed that a small number of individuals I interacted with had strong opinions, independent of the types of events I attended, and would always want to convince me of their preconceived notions of the economy in relation to climate change. When these views were not in line with what I knew based on my expertise in business and environment, I tried to convince them differently. However, it did not matter how many times I tried to persuade them; these individuals would seek to convince me that their beliefs about the economy and the climate were all true because of historical observances they concluded themselves, ignoring all scientifically based conclusions.

This type of interaction was also prevalent in the public group consultations I lead. Except, it was rather quite harder to navigate the outcome as these groups included individuals who had beforehand read through social media posts and online blogs about the topic of sustainable development and solar investing I was conducting as a stakeholder manager. I was not prepared for these questions as they focused on the potential negative aspects of solar panels, rather than the confirmed successes the industry offered. So, it was only appropriate for me to make a list of the questions during the question and answer session. In this way, I did not have to respond at the same time but assured the group that I would get them the answers they requested, within a reasonable time span, after discussions with senior management. Hence, I emailed the list of answers to questions to those who were interested in the group.

The results of this consultation with the group of people, some of whom engaged in investing, after witnessing SolarShare’s transparent process. This ability to have open communication allowed people the ability to see for themselves the value, opportunity, and commitment to the organization's core mission and objectives. This experience allowed me the opportunity to increase the number of people who were engaged in SolarShare’s solar energy projects and deliver on both TREC’s core mandate and SolarShare’s sales results.

TREC – Metcalf and York University – (Renewable Energy Researcher)

In my experience with facilitating an online forum for a captive audience in renewable energy, I found that there were limitations to the participant discussions, which reduced by fifty percent over the last few months of the entire duration of the project. Mainly, the format of the online forum was to present what Ontario energy programs were available for homeowners. A lack of structure in the presentation of the materials on the online forum may have also decreased online discussion as there were too many options to choose from and less information presented about each one.

There were also no initial introductions between the online participants to ensure a higher comfort level in the group. I think this is helpful to engage in discussions since every individual had an identification number to control privacy and follow ethical measures for collecting data. In this case, because this type of engagement method was in the testing phase, the online participants may have needed more user-friendly tools to be engaged enough to adopt energy conservation and energy efficiency measures at home.

WWF Canada – (Renewable Energy and Stakeholder Engagement Researcher)

As a renewable energy and stakeholder engagement researcher for WWF-Canada, I found that the best global practices for engaging society in renewable energy projects involved first having successful pilot projects, engaging students and the public through social media, community competitions, and including external expert speakers at community meetings. I also found that most of the sustainable development initiatives were successful when the focus shifted from an environmental theoretical approach to a social strategy, and then to the economic approach.

However, depending on the social context of the issue the stakeholder manager is targeting these three methods can be interchangeable. Community engagement tends to be specific to the targeted population. Small scale and local community matters tend to have higher and more dedicated individuals continuously involved in the initiative as the impact is larger, as opposed to broader and very different problems that encompass many different communities at once. (See Appendix: WWF Report - Stakeholder Engagement Best Practices).

4.3. SECTION C: Observations and Analysis

My analysis of my stakeholder management role for SolarShare was that the type of objectives I pursued were to persuade ultimately stakeholders to act to invest their funds directly in solar projects. This investment mechanism incentivized stakeholders to become shareholders (bondholder) through a fixed interest rate paid out twice per year based on their principle. This model funded the growth of SolarShare's projects, and research and expertise, in areas of interest to its members such as the Community Conservation Challenge (CCC) forum for the Meltcalf Foundation (see below) and York University (see above).

However, to generate this kind of action from stakeholders, SolarShare's stakeholder management efforts also had to change opinions to convince potential stakeholders that the investment was viable and worthy of the associated risks. To achieve this objective meant that as a stakeholder manager, I had first to inform and explain to the an individual (potential investor) the SolarShare brand and its mission to combatting climate change by building solar projects and providing 'green investment' opportunities for Ontarians to earn a return.

I observed that my stakeholder engagement strategies and my social media research contributions to this renewable energy initiative also allowed me the capability to assess the interests of a captive audience (members of SolarShare and Zooshare). In other words, my understanding of the need to integrate energy efficiency and energy conservation measures as a stepping stone to reducing society's dependence on polluting fossil fuel sources helped contextualize my role as a stakeholder manager. By having background knowledge of the stakeholder type, social contexts, and approach types I was working with I was able to understand the interests of participants. I was also able to strategize using the best methods that would be most appropriate to encourage these members to undertake energy-themed projects at their place of residence (house, unit in a multi-storey building). It is essential for a stakeholder manager to know what shared values, culture and knowledge can be found among the individuals or groups they are trying to engage. My information and market intelligence gathering efforts also contributed to SolarShare's objective to persuade residents in Ontario to invest in the future of renewable energy through its solar projects.

Despite these well-executed efforts, I observed difficulty with SolarShare's attempt to reach its stakeholder management objective. This challenge may be in relation to communication focused on the attractiveness of its value proposition rather than its engagement strategies. Namely, SolarShare's value proposition to its members (be they apartment or homeowners) was an assurance that their investments were being used to support the production of electricity generated from solar rooftop projects. These solar energy projects, in turn, power the local communities where they are located.

However, regardless of participants' receptivity to being informed and persuaded towards the value of SolarShare's investment proposition, I observed that very few members would be interested in undertaking any opportunities through SolarShare to reduce their electricity consumption within the confines of their home.

Therefore, this made me realize that when it comes to investments both individual and organizational members can be similarly risk averse, and equally demanding of high accountability and governance structures to provide transparency. People (investors) expect the same level of structure and security in knowing the allocation of their funds, for example, similar to a banking institution. However, they also demand full transparency from the primary organization as this new type of 'green investing' at the time was in its primary stages of introduction to the public. In my role as stakeholder manager, I identified that it is beneficial to provide information that ensures peace of mind to stakeholders to maintain their continued engagement in any initiative.

<u>TREC – CCC – Metcalf & York University</u>

During an analysis of my research contribution to TREC and Metcalf Foundation's '*From Community Power to Community Conservation'* project through the lens of stakeholder management, I realized some crucial points. First, my research contributed to the creation of an evidence-based framework that showed the effectiveness of a community-based conservation program. TREC and Metcalf's completed framework attempts to engage external individual and sectoral stakeholders. This research-based stakeholder management strategy provided information to and altered opinions of stakeholders for the best practices in implementing energy management projects at the community level. The approach used in this context is another example of how primary research can be used as an issue-framing tool to influence the decision-making process of stakeholders overseeing a particular issue.

Second, this initiative also utilized direct stakeholder engagement strategies through my role as a facilitator and communicator with online forum participants. My role as a stakeholder manager, in this case, is also interesting as it showed me that the tools of direct engagement and issue framing were co-dependent to advance the objectives of the two organizations. Namely, the direct engagement was required to gather input on the research. This method of engagement helped frame the issue in a way that was acceptable to the stakeholders, *and* the issue framing strategy was required to provide the original content that empowered and justified the direct engagement efforts. Both of these activities could have also led to traditional and new media engagement strategies decided by the two organizations if it was evidenced that this first online forum initiative was successful. In case, both organizations decided to expand the research in future.

WWF

An analysis of how my research to WWF contributed to the organization's stakeholder engagement strategy, I was able to make several novel observations. First, this was an instance where I could clearly observe the creation of how a powerful stakeholder management tool can be achievable through issue framing. I found that issue framing works by creating valuable research and using that to frame a public policy issue, and thus change how the specific issue can spark discussion with stakeholders. Based on my past business experience, I can see the resemblance of issue framing having the same role as niche creation does through brand management. A new niche can completely change the view of a brand by its consumers and the wider market.

Similarly, the successful reframing of an issue can completely change the perspective of how a stakeholder views the idea or position presented. Therefore, by preparing a report on the best stakeholder engagement practices for the sustainable energy planning process – including for renewable energy, energy efficiency, and energy conservation initiatives, I was able to give WWF policy-oriented research. This research would help them re-design how they frame their issues to influence the perceptions and opinions of government, academic, and industry stakeholders in matters of sustainable energy planning.

Second, by actually performing the research and analysis on the diverse range of stakeholder management strategies used by different municipalities, provinces and state energy companies from around the world, I got the unique opportunity to research, analyze and develop lessons learnt on stakeholder management approaches for a sub-category of sustainable development. Unlike most of my other portfolio contributions where I am directly engaging individuals and member organizations in Canada, this research project allowed me to assess comparatively stakeholder management for sustainable development on a global scale. It gave me the knowledge and experience to scale up my observations on the best stakeholder management strategies and see if they could transfer to the national level. From what I observed, the same general principles and practices that I applied in my other projects apply to the national level as well and can be seen in my research findings (See Appendix: WWF Report – Stakeholder Engagement Best Practices, Section 4. Observations).

5.0. Case 3: Environment and Climate Change Canada

Position Held: *Co-Chair GCWCC & Junior Science Program Officer*

5.1. SECTION A: Case Background

As of February 2015, I had been a coop student for the Government of Canada's (GoC) Department of Environment and Climate Change Canada (ECCC), formally Environment Canada. During the time from September 2015, I accepted the opportunity to co-chair the Government of Canada Worker Charitable Campaign (GCWCC) at the Atmospheric Science and Technology Directorate (ASTD) of the Science and Technology Branch (S&T) branch of ECCC. Together with the Regional Director General's (RDG) office for Ontario, which was both located in Downsview, Ontario.

The GCWCC campaign had a very strict timeline with the start of activities from September to early December 2015. The core of this campaign is related to the GoC's corporate social responsibility mandate and is a way for public servants to contribute to making a difference in communities across Canada through the donation of funds to the United Way/ Centraide and Health Partners, or any other registered Canadian charity of choice.

These charities have dedicated staff who oversees the distribution of these funds in support of much needed local community programs and other registered charitable organizations to meet the goals of the following (United Way Centraide Canada, n.d.):

(1) <u>From poverty to possibility</u>

- Moving people out of poverty
- Meeting basic human needs (food, shelter, jobs, etc)

(2) <u>Healthy people, strong communities</u>

- Improving access to social and health-related support services
- Supporting resident and community engagement
- Supporting community integrations and settlement

(3) <u>All that kids can do</u>

- Improving access to social and health-related support services
- Helping kids do well at school and complete high school
- Making the healthy transition into adulthood and post-secondary education

As a Junior Science Program Officer and a volunteer co-chair of the GCWCC, I was tasked with fundraising a goal of $50,000 to be donated to the charities stated above. In addition to completing my regular workload, I had to fulfill the following roles:

- Plan and lead the development of activities needed to engage staff to donate,
- Evaluate and repair any communications issues that emerged,

- Develop and implement direct strategies that would maximize the efficiency of collecting donations promptly and lead a team comprised of professionals, technical, and administrative staff to use this approach.
- Communicate effectively to senior management by leading GCWCC briefings to ASTD's Director and RDG's office and brief senior management of the Ontario Environment Canada Council (OECC).
- Demonstrate relationship-building skills to develop strategic alliances (security staff for overseeing dropboxes). I also had to work both horizontally and vertically with internal stakeholders and manage complex stakeholder situations as they arise.

At the time, the ECCC- Downsview community contained several hundred employees, all of whom belonged to the various other branches within the Department. These employees consisted of new hires, students, and other full-time and part-time staff. There was a small group of volunteer ambassadors assisting in the role of distributing and collecting GCWCC pledge forms for each branch of ECCC, which was present in Downsview. It was expected that all of these volunteers would help contribute some of their time for doing office visits to seek funds, as $50,000 was a large sum to reach.

The first month I used to develop a plan to execute a 2015 GCWCC Opening event for the Downsview campaign and make everyone aware of the events, activities, and distribution and collection of pledge forms, that was one method used to collect funds towards the final $50,000 goal. Events were prepared and set to take place from mid-October to the end of November, with a 2015 GCWCC Wrap-Up held in early December.

My primary goal was to engage employees to donate any amount to the campaign. Throughout the process, I was able to promote the important purpose of government staff and retirees in giving back to our Canadian communities. Completion of this project was necessary to meet the final goal, which reflected upon senior officials at ECCC.

5.2. SECTION B: Challenges and Accomplishments

The structure of the GCWCC Campaign Committee was setup by senior management in the Director General Office (DGO) of ASTD and the RDG of Ontario. The entire fundraising process had many unexpected and expected challenges. However, even though I was faced with these many challenges in completing this task, these were all overcome in a very short time to create positive employee engagement and to meet the ECCC-Downsview's goal of $50,000 towards the 2015 GCWCC.

- The first challenge I noticed was that people had their own priority work schedule and only so much time in the work day to get them done. Sometimes, due to technical problems, delay in information communication, and a lack of easy access to food/refreshments within the workplace establishment people had less time to participate and contribute to activities that needed more than a half-hour time commitment.
- The second challenge I faced related to the structure of responsibilities and setup of the events as there was no previous documented structure to follow from previous years,

resource database, up-to-date members list, or list of contacts within the volunteer/ambassador network for event activities.

- The third challenge pertained to the process of getting access to space, permissions, and access to communication services for promoting fundraising events as there were multiple events usually occurring for a short time. The GoC was also in the process of undergoing an email migration to “canada.ca” so almost all of the email distribution lists were either inaccessible or lost. This lack of email access limited my ability to communicate and organize events, as well as recruiting volunteer ambassadors (ECCC staff) to distribute fundraising pledge forms. It was also a challenge to plan events/ activities within a very restricted budget.

The GCWCC uses pledge forms provided by United Way to allow employees the ability to use payroll deductions as one option for donating. I learnt that in the past, many employees would choose to volunteer their time to collect these forms. However, I also noticed that many employees do not have a lot of extra time to dedicate to distributing and collecting these pledge forms. Therefore, I decided to develop and introduce a central collection system using secure dropboxes so that pledge forms could be centrally distributed and received. As this process was a new one, I found it challenging to explain to staff and introduce the concept as an efficient system. This challenge was mainly due to people preconceived notions of the dropbox system not be useful to them as sensitive information was being collected. However, due to continued communication and assurance that the dropbox was overseen 24/7 by security and financial staff, the process was accepted and widely used as a major source of funds towards the final goal of $50,000.

A clear observation of people's reactions to the campaign was that because they had their biases towards the charitable organizations that were involved in collecting the funds, most people did not want to donate directly through this option of payroll deductions. These deductions were applicable to the following year. It was also difficult to make people even aware of all the events that were happening due to a lack of access to emails, staff email lists, and most people get enough work emails per day. Thus, sending an additional 'communications' email would have lower chances of being read.

Many other challenges arose while mobilizing people to achieve a specific objective while working within a large institution such as ECCC. This specific problem was due to some people misinterpreting their roles and responsibilities when completing the tasks they were assigned. However, because of my experiences in conducting fundraising events for the LNSA and community outreach events for TREC-SolarShare, and leading a large number of people in coordinating various scales of community events, I was able to use similar stakeholder engagement strategies to lead employees in the GCWCC campaign.

Among all of these challenges, it was also difficult at times to communicate to and share the responsibility of organizing such a large campaign when there were two parties (two co-chairs) with one party having no prior experience in stakeholder management and fundraising activities. When I first started the Downsview-GCWCC, I noticed that even though some staff did not want to contribute directly through the payroll deduction due to their personal contributions to other external charities, some of them did participate in fundraising activities. The GCWCC Campaign's activities were successful in engaging staff in food-related events since the building's cafeteria was inoperable, and there were no other means of getting freshly baked goods on building premises.

This GCWCC campaign was a success in engaging employees during the September – December months. However, with limited resources and direction from the United Way staff, the GCWCC in sum caused some conflict with other parties involved, accommodated others who supported the campaign and understood the complexity of leading a fundraising campaign within a complex organization, and allowed others to be entertained and have access to food on premises. I led the GCWCC's fundraising events for the Downsview-ECCC community as effectively as I could during a time of limited electronic communication. I had also to strategize and use different forms of communication such as numerous posters to advertise events that I planned. These events only required only a few minutes of people's time to collect funds as this contributed in small ways to the campaign's goal.

Overall, the strategy I used to engage employees in contributing to the campaign goal was designed in such a way to require only about 5 – 30 minutes of their time. This list of activities was necessary to keep the momentum of the campaign high (employee morale) and act as a consistent reminder for people to remember to donate towards the final goal.

At first, the centralized collection box located at the security desk was not widely accepted by staff. However, once the campaign had ended, many people had said they preferred the dropbox collection system for their GCWCC pledge forms due to the anonymity and privacy of information involved. In so doing, this encouraged more people to give generously, and a choice to either participate or not participate in events. I found that word of mouth was the most successful method in sharing information during a period of no access to email event notifications. The challenge of advertising events was overcome by my strategy to use hundreds of colourful and well-designed information posters throughout the bulletin boards within the building, as it aided in spreading information quickly and easily.

I found that it was beneficial to have external guest speakers at both the opening and closing of GCWCC events. Through a method of story-telling, these external speakers were able to explain better the use of the campaign donations in communities in Toronto. In one instance, the story of how the GCWCC campaign helps fund women's shelters and youths in need were both inspiring, emotional, and encouraging to encourage people to donate to the cause. It was quite challenging at times to lead the GCWCC event while navigating the hierarchical structure within a government organization to obtain resources for events. However, these were overcome because I was able to lead people who were very helpful to donate some of their time, advice, and willingness to introduce me to others who could have been of assistance at different points in time throughout the span of the four months of the campaign.

5.3. SECTION C: Observations and Analysis

By conducting an analysis of the GCWCC in the context of stakeholder management as a federal public service corporate social responsibility (CSR) initiative, I detected the following observations. First, through my leadership in the initiative, it was evident that I was trying to achieve multiple types of stakeholder management objectives. For example, we aimed to raise awareness about the presence of the GCWCC and its associated activities, which were mechanisms for collecting donations. We also sought to convince our stakeholders that the GCWCC is a worthy cause to support despite some of the staff's initial perceptions about the United Way charitable organization. Finally, we sought to persuade them to act by donating either their time or money to achieving the GCWCC's goal of $50,000. This CSR initiative therefore showed all three types of stakeholder management objectives, in a tiered format – working from informing, to changing opinions to persuading to act.

Another set of observations is that all of my stakeholders in this particular initiative were internal stakeholders, that is, they were all employees of the public sector. This key feature meant that the GCWCC activities had a type of automatic acceptance, in that they could not avoid the messaging I was sending them through our various engagement activities because the initiative had the full support of senior management. It did not mean that the stakeholders automatically accepted the legitimacy of the messaging, but that they agreed to the fact that they were to be exposed to the GCWCC team's 'ask' for donations. Not doing so, would risk going against senior management's instructions. For example, even though I gathered intelligence about the significant variance in the levels of support the initiative had throughout the organization, no one complained or attempted to intervene against the officially sanctioned activities. This variance made it apparent to me that there is indeed a qualitative difference in engaging internal stakeholders versus external ones, in that there is significantly less risk of backlash. This difference is because internal stakeholder management efforts must have structural support from the leadership of the organization. An additional observation was that all my stakeholders were individual employees, rather than organizations. The implications of these findings are comparatively discussed in the outcomes chapter.

Finally, I have concluded that the stakeholder engagement tools and strategies I have led my team to use involved both on-the-ground (and direct) engagement activities. For example, through activities such as canvassing, lotteries, and fundraising events - bake sales, 50/50 draws, and auctions). Additionally, strategic use of internal corporate marketing tools to generate a virtual community following and to mobilize that community (to translate it) into donations and moral support for the initiative. Rather than textbook approaches to engagement, this experience showed me how to leverage strategically multiple types of stakeholder management tools to increase their collective effectiveness, in effect – to create a multiplier effect. For example, the amount of donations started to increase when my team had ramped up our local canvassing efforts, in conjunction with getting the local corporate communications team to send out our advertisements using official emails. The use of multiple tools allowed us to raise gradually awareness to a level where our internal stakeholders formed a sense of (self-driven) community that began to create its own cultural perception that not only raised awareness of GCWCC but also, brought it to a level where most employees developed an emotional stake in seeing it succeed. The outcome was the increase of significant stakeholder contributions both in terms of quantity (later events were better attended) and quality (significant single donations started to pour in to help us meet the target towards the end).

6.0. Case 4: The Packaging Consortium

Position Held: *Sustainability Project Intern*

6.1. SECTION A – Case Background and Context

During the time from February 2015 – May 2015, I was a volunteer Sustainability Project Assistant for the Packaging Consortium (PAC), formerly The Packaging Association, located in Toronto, Canada. PAC is a not-for-profit cooperation founded in 1950 and consisting of over 2,100 members throughout the packaging value chain.

PAC has a very prominent role in being a partner and catalyst for driving progressive change through leadership, collaboration, and knowledge sharing in the packaging value chain and has the following values:

- North America Centric providing global access,
- Advocating for all materials and package neutrality,
- Maintaining a process that is all inclusive, and had transparent collaboration,
- Everyone is invited to join.

My role as Sustainability Project Assistant was tailored to PAC Next, an initiative of PAC with a mission to “unite leading organizations across the packaging value chain to collaboratively explore, evaluate and mobilize innovative packaging end-of-life solutions”, in order to create “A World Without Packaging Waste”. This was an excellent opportunity for me as I was an observer to PAC Next's operations of reaching its primary goal, which is to "minimize recovery system costs, while maximizing recycling rates and the value of recovered materials".

PAC Next partners with like-minded organizations that also have an interest in the packaging value chain. Hence, continues to achieve their objectives in providing solutions to "economic recovery leading to the improved reduction, recycling, reuse, up-cycling, composting, energy-from-waste, and other emerging technologies" that would meet the overall vision.

During my volunteer work for PAC Next, I had to fulfill and participate in the following:

- Participate in PAC webinars and seminars with leading industry stakeholders within the packaging value chain and observe the challenges and solutions faced with recycling up-cycling within the packaging value chain.

- Conduct research and fact finding as required by project needs project needs (i.e. recycling and waste management, consumer behaviour, policy including Extended Producer Responsibility, packaging innovations, plastic, marine debris and litter, Operation Clean Sweep, energy-from-waste, etc.).

- Conduct media scanning for releases on packaging and sustainability issues.

- Assist with social media postings and updates.

- Schedule and record meeting minutes and help maintain online resource database.

- Participate in and contribute to discussions during the "Ultimate Packaging Optimization Course", a full-day workshop-based packaging design course that provides the tools and insights to stakeholders within the packaging value chain to deliver better packaging solutions based on taking a life cycle approach (PAC, 2016a).

- Record notes, post updates and photos and learn about product innovation at a three-day event – "A Day in the Life Symposium" – an interactive life-cycle journey of an imaginary nutritional packaged product. Each day featured addresses by industry leaders, real time audience engagement, and networking activities. The event was held at the Steam Whistle Brewery, in Toronto, Ontario to inspire innovation, collaboration, and celebration. Keynote speakers opened with current and future retail trends that drive consumer engagement and sustainable supply chain innovation. This collaborative workshop featured a retailer, brand owner, package maker, waste manager, and government leader demonstrating sustainable design life-cycle thinking for PAC's imaginary product. On day two, the workshop featured disruptive packaging innovation, creativity from graphic design students and celebration of the winners. On the final day three, the workshop featured next life value-added solutions for packaging waste to close the loop of the journey of PAC's imaginary product (PAC, 2016b).

6.2. Section B – Challenges and Accomplishments

As a researcher for PAC and a participant and note taker at stakeholder meetings, there were some obvious challenges during discussions and producing the deliverables, which I noticed and listed:

- The first challenge I observed was the communication among speakers at meetings. This problem related to the availability of stakeholders to attend a meeting, for example, the timing of discussion sessions could not accommodate all parties at all times. It was quite challenging to have stakeholders from Canada and the United States to be available at all times for all meetings.

- The second challenge was faced by everyone, which was within the context of changing consumer behaviour towards the products they buy, such as those with non-sustainable packaging

- The third challenge was the approaches that were used during meetings. As, in some cases there needed to be interchanging dynamic that had either a clear bottom up-approach, or a clear top-down approach. I found that sometimes the material recovery facilities (MRF) (bottom-up) were the ones leading the discussions, and at other times, the brand owners (top-down) were leading the discussions. The disparity here is that both MRFs and brand owners people had the power to give clear directions in order to control/impact the outcome. Level collaboration is what was needed to maintain productive meetings and ensure open communication in plain language for a clear understanding.

Challenges observed in communications that were uncontrollable related to dealing with problems caused by consumer behaviour towards goods that were presented in a particular way. There were some challenges in creating the white papers for industry use, as stakeholders were not always available international meetings via conference calls to contribute to discussions in a timely manner. However, these problems were solved through the circulation of notes from previous meetings. The bottom-up approach worked in some meetings I participated in, as the challenges experienced in a MRF was brought to the forefront. Challenges in different municipalities were also highlighted so that brand owners who develop their packaging can continue using the types of plastics, paper and inks that are easily recyclable or can be used to create new products through upscaling, which is the creation of new products from waste materials.

One of the other challenges I found was figuring out a way to convince consumers to change their behaviour in the types of packaging they chose to purchase their goods. For example, consumers often do not purchase individual vegetables wrapped in plastic because they do not know or understand that the type of plastic used helps to prolong the shelf life of the products on grocery store shelves and helps prevent unnecessary food waste. Therefore, this is where PAC would focus on being a vital partner for industries within the packaging value chain. By contributing my research towards PAC's projects, I was able to keep industry informed about the latest industry news and waste management legislations across Canada. I contributed to these updates by researching and conducting media scans for extended producer responsibility (EPR) issues that in different provinces throughout Canada.

I also observed that PAC was inclusive and did not exclude stakeholders from any particular packaging waste stream. For example, packaging is not only the wrapping the product is housed in, but also the components of the products themselves. This distinction I observed through my research of marine debris where micro-bead plastics from body care products were ending up in our waterways and eventually the ocean whereby causing more harm, since these plastic particles are not easily degradable.

Through participation in numerous online PAC Webinars, seminars, conferences, competitions, facility tours, education programs, trade shows, technical work groups, and other social activities, PAC is able to engage a broad spectrum of industry experts, businesses, multinationals, academic institutions, key publications, consultants, organizations, associations, and local governments in order to drive progressive change by exhibiting leadership, promoting collaboration, and encouraging knowledge sharing across the packaging value chain in North America and around the world.

I was also an observer during the discussions between different stakeholders in the solid waste industry to target challenges that were affecting the capacity of MRFs to process large amounts of waste products within the municipal regulated time given to do so.

6.3. Section C – Case Observations and Analysis

Analyzing my contribution to the industry association's stakeholder management efforts through my role as the sustainability project assistant, I observed the following features. First, the organization directed its efforts both internally towards its members, as well as externally towards other organizations – including government and civil society organizations (NGOs) – that might interact with its members through the production value chain or the market. Hence, this experience showed me that stakeholder management objectives could target a wide variety of stakeholders, through related and similar messages. This is important to note because it runs contrary to classic communications practices. A complimentary point is that all the members were private sector organizations rather than individual persons, thus interacting with them as stakeholders created unique requirements, which I will make explicit in my outcomes chapter.

My second major observation is that the organization used everything from expert forums, to collective learning exercises, to advertising and social media, to engage its internal stakeholders, target external stakeholders and potentially interested consumers. This observation again supported my perspective of a variety of stakeholder tools can be utilized in numerous social environments by the same agent or initiative to support the same objectives.

My third major point, which gets its own category in my outcomes chapter, is the idea of social contexts or social environments and geographies. By having to organize a wide range of organizational stakeholders, from both Canada and the US, as well as incorporate other interested parties, I became very aware how both the overall social context and geographic elements influenced and bounded or delineated the conceptual area where the stakeholder engagement occurs. For example, while two engagement events in the initiative may have looked the same from the outside (one with multinational representatives, versus one with local industry representatives and interested individuals from the local community), the subtle mechanisms of how they unfolded was dramatically different.

7.0. Outcome: Sustainable Development Stakeholder Management Framework

This section will discuss the outcome of my case analysis, which centers around the various stakeholder management approaches I applied while I worked in the positions described in my four cases. In these positions, I aimed to help the organizations I worked for engage stakeholders using different approaches in their respective social contexts to advance different sustainable development objectives. After reflecting on all these experiences, I combined the best practices that I learnt, into a new stakeholder management framework. I felt that my new framework must incorporate all the following elements in order to be sufficiently comprehensive to categorize all the important details of my stakeholder management efforts to achieve various sustainable development initiatives. The following is just a summary of the highlights, but each of these items will be discussed in more detail accordingly.

Objectives types

- Information: *informing or educating* stakeholders on a sustainability theme or specific issue.
- Persuasion: convincing stakeholders *to adopt or abandon a position or opinion* regarding a specific sustainability theme or issue.
- Action: convincing stakeholders to *take a specific positive or negative action* on a sustainability theme or specific issue.

Stakeholders types

- *Internal stakeholders* (intra-organizational personnel), include individual employees of an organization, or students of a specific program who are naturally invested in the success of the sustainability initiative.
- *Internal stakeholders* (member organizations), can include organizational members of any professional association, who for the purposes of stakeholder engagement are acting as a collective body, rather than as individuals.
- *External stakeholders* (individuals in the community), includes individuals who comprise of a wider community and who can choose to participate or decline their participation. This includes students or employees who are not automatically invested in the success of the sustainability initiative.
- *External stakeholders* (investors), such as potential individual, organizational or institutional investors or resource contributors. In this category, the stakeholder can be either an individual person or a collective.

- *External stakeholders* (collaborator organizations), such as private sector, public sector, environmental non-governmental organizations (ENGO) or academic institutional partner organizations.

Social contexts

- Advancing sustainability within an organization (narrowly bounded area, structured)
- Advancing sustainability within a community (narrowly bounded area, unstructured)
- Advancing sustainability within an industry/sector (widely bounded area, unstructured)
- Advancing sustainability within society (widely bounded area, unstructured)

Approach types

- *Direct Engagement*: solicitation, canvassing, and physical community mobilization.
- *Issue Framing*: research generation, sponsorship and dissemination, and lobbying.
- *Traditional Marketing*: media relations, advertising, trade shows and association meetings.
- *New Marketing*: social media and online community mobilization.

The next four sections will explain in detail the rationale and the definitions of my proposed categories for this new framework. I will also discuss the value of these categories when considering how to design and implement stakeholder management strategies. The last section showcases the diagram showing the draft framework and briefly discusses the benefits of integrating these differing elements.

7.1. Objectives types

In line with the traditional thinking in stakeholder management and communications theory, I hold that there are three objective types that a stakeholder management initiative can aim to achieve. These types of objectives include either providing information to stakeholders, persuading stakeholders to take or hold an opinion, or convincing the stakeholders to take a specific course of action. When supporting the implementation of a sustainable development initiative, either with internal or external stakeholders – including, if they are individuals or groups of stakeholders all three of these objective types are relevant and usable. It is worth noting that stakeholder management efforts that have the objective of informing, shifting opinions or rallying stakeholders to action are used by all kinds of organizations, including governments, industry, and ENGOs. In essence, if a stakeholder engagement activity is not trying to achieve an objective that falls under one of these three types, then it is not a genuine stakeholder engagement activity.

It is worth noting that the three objective types are ordered so that more complex objectives types depend on simpler objective types. First, the organization must provide information or education to stakeholders on a sustainability theme or specific issue. If the stakeholder group is not engaged already on the theme or issue, there is a strong likelihood that they might not understand the situation Therefore, this type of objective is often used to help establish an issue in the minds of the stakeholder constituency. Properly framed, the activity is limited to providing objective information about the issue, while minimizing perspectives on the interpretation of that information which is usually achieved as a separate objective (see persuasion below). Sometimes, the communication of objective information can be interpreted as being subjective or ideological, especially in the context of politically and culturally charged issues such as sustainable development. However, even in more persuasion-oriented (influence) or action-oriented stakeholder management matters, this objective can be used as a means to provide information prior to the argument.

The second order of complexity is the objective of Persuasion which aims to convince stakeholders *to adopt or abandon a position or opinion* regarding a specific sustainability theme or issue. This aim of persuasion is distinct from the information objective of stakeholder management because the intent is to create an inter-subjective perspective on the existing information. Similarly, persuasion is distinct from the action-oriented objective (see below), because it aims to form a cognitive position or perspective and does not need to convert the stakeholder into an agent or activist. Often associated with standard public affairs efforts, this persuasion objective is a normal part of stakeholder management and seems to be used by different groups such as sustainability-promoting ENGOs. As well as, by the energy industry marketers, and applies equally to both internal and external stakeholder management efforts. For example, through my fundraising experience with the LNSA (Case 1); research at WWF – Canada (Case 2); and leadership of the CSR effort of public service-GCWCC (Case 3), I attempted to advance a persuasion-oriented objective. Although, this objective type was directed at a broad range of stakeholders types, supporting differing positions on a variety of issues in sustainable development, delivered through different approaches.

The last and most challenging type of objective a stakeholder management effort could aim to achieve is convincing stakeholders to *take a specific positive or negative action* in a sustainability theme or particular issue. This aim for a stakeholder to act accepts that the two lower tier objectives of information and persuasion have already been achieved and stretches beyond them. Getting even sympathetic stakeholders to take definite action is challenging because it imposes costs – real, potential or perceived; economic, social or psychological – on the stakeholder(s). If the action required has to be performed in conjunction with other stakeholders or entities, as is usually the case in sustainable development issues, then there are added costs of overcoming collective action problems.

For example, during my role as a stakeholder manager to persuade individuals to commit to reduce their energy consumption and waste (Case 2), I observed a reluctance from some sympathetic individual stakeholders. Their unwillingness to participate was due to the perception that even if they made the sacrifice and acted to meet the organization's objectives, they would not be able to make a large enough impact because too many others would decide to not participate (critical mass and free rider problems). Whether or not the stakeholders in Case 2 accurately assessed the situation can be considered irrelevant. What mattered was that they believed that it was true and thus were unwilling to act on a pro-sustainability opinion that they held because of their belief that it would be futile waste of their resources. This illustrates the importance and difficulty of action-type objectives in promoting sustainable development, and it shows how the three objective types are connected.

7.2. Stakeholders types

Observing the different types of stakeholders, I started to notice patterns in their behaviors that certain groups exhibited, so after analyzing these patterns I came up with my categories of stakeholder types. These categories are broad enough to fit any potential stakeholder category into it making it a valuable categorization method. The differences in the stakeholder types focus on the degree to which the stakeholder audience is initially captured (internal stakeholders) or autonomous (external stakeholders). My experience has shown that this distinction is important because stakeholder audiences that are initially captured, maybe because of their baseline connection with the organization that is advancing sustainability initiative, they are easier to engage with than those stakeholders that are autonomous. It does not guarantee that the stakeholder management initiative will necessarily be more *effective* (successful) but it does guarantee that the initiative will more *efficient* (lower cost to engagement) than a comparable initiative with an autonomous audience. For example, employees who are obliged by their employer to support their organization's sustainability initiative under a CSR program are easier to engage than individuals outside of the organization with a comparable CSR program, in the very least because there are existing methods (work email, intranet, management communications) and incentives (supervisors communicating the expectation that everyone should consider supporting the initiative) that are not available with autonomous audiences.

However, the reasons that this only translates into efficiency but not into effectiveness of the stakeholder engagement initiative is because (as my experience has shown) the initially captured audience may be compelled to accept the invitation to engagement but it cannot be compelled to accept the premises of the initiative. In other words, people cannot be compelled to actually accept the stakeholder engagement objectives. If they are *forced* to learn, or accept opinions or take certain actions then this is outside the scope of not just CSR, but stakeholder management in general. For this reason, the effectiveness of stakeholder management initiatives promoting sustainability with internal audiences is not guaranteed. There are two reasons for this, first the internal audience that is compelled to be engaged tends to be entire population, including hostile segments, whereas by contrast external audiences that choose to allow themselves to be engaged in sustainable development initiatives are likely to be sympathetic to the initiative. So, you could compel everyone to come, but not everyone who is compelled to come will be supportive. Second, an internal population will always be a sub-set of the wider community, industry/sector or society at large. So, if you can gather an autonomous attendance of comparable size, its members will likely have more supportive stance than an initially captured internal audience. Looking at Case 3 as an example, many individuals came to my federal public service CSR events, but many fewer contributed to the objectives of taking action by donating to the cause than they might have if they wanted to be there. It is therefore possible to consider a counter-factual situation where a similar CSR event, with the same 1) investment of stakeholder management resources, 2) financial target and 3) size of the stakeholder population, is held outside in the public with an autonomous population – which might be more difficult to attract (lower efficiency) but ultimately yields more financial donations (higher effectiveness).

Aside from the internal and external stakeholder definitions, I have also distinguished between several other subsets of stakeholders that are also important in explaining stakeholder behavior and strategy preferences. This includes the distinction between stakeholders that are *individuals* (intra-organizational individuals, individual members of a community*)* and those that are entities comprised of a *collection of individuals* (member organizations, collaborator organizations), and those where the definition between individual and collective is trivial (investors)*.* There are several important distinctions which I have noticed apply between individual and collective stakeholders, except with the investor category.

First, an individual stakeholder can more easily *internally commit* to delivering a course of action, because there are no collective action problems (coordination problems, commitment problems). A collective stakeholder will have to exercise resources to internally commit its constituent individual components to deliver a course of action. Second, an individual stakeholder can more *quickly respond* to the stakeholder management initiative, either negatively or positively, because again a person can more quickly figure out their own stance on a position and respond compared to a group of individuals, in the very least because communication between members takes time to travel so decisions take longer. Third, collective stakeholders often have a higher impact both *absolutely* and *proportionally* to help the stakeholder management initiative meet its sustainable development objectives. In absolute terms this advantage occurs because the collective member is larger than a single individual member. In proportional terms this advantage occurs for two reasons that can be summarized as ‘the collective member is more than the sum of its parts’. First, this is because every individual who is part of the collective member is not just a piece of the collective but also has extensive personal relations that connect the individual to other networks, as most individuals who join a (collective member) organization have stronger inclination to be socially active and are therefore likely to have wider networks than the average individual member. Second, the organizational techniques and resources, including reputation advantages, that the collective member has increased its sub-component effectiveness compared to individual members. For these reasons individual and collective members of stakeholder audiences should be treated differently, including with the strategies and tactics that are used to engage them.

An area where I did not distinguish between individual and collective stakeholders is when the stakeholder being engaged is the investor type. That is, in a situation where the stakeholder engagement effort defines the entity as someone who could either provide financial resources to the sustainability effort, as part of the current initiative or in a later campaign. Here I found that the both individuals and organizations can have very similar incentives, skills, scales of resources and variability. For example, I observed both individuals and organizations acting in a cautious and low contributing manner as well as in an ambitious and high contributing manner. Similarly, I observed both organizational and individual investors having both high level and low levels of knowledge surrounding the sustainability initiatives and associated risks, and similarly high variability in terms of investment-related time horizons (do they want quick returns or long-term investment). As well as, their self-confessed motivation for responding to my stakeholder engagement effort as being either altruistic or strategic. Thus, when it comes to money my experiences have shown me that both individual and collectives of stakeholders can be equally difficult to predict.

7.3. Social contexts

The preferred types of approaches, key stakeholders and objectives do not on their own provide enough information to identify the most optimal stakeholder management strategy and related tactics in achieving sustainable development. What is often missing from stakeholder analysis models and frameworks is the impact of social context. Based on my experiences, I have observed how important it is to include such a category, especially because I hope that this framework will be usable for any social context that focuses on sustainable development. To address the need, I developed four categories of social contexts based on a two-by-two matrix regarding how bounded is the area of activity and how structured are the rules of the social context (Ostrom, 2010).

The *area of activity* of the stakeholder management initiative refers to a variety of factors, which for the purpose of the framework I simplified into either narrowly bounded or widely bounded. Narrowly bounded areas are limited to a specific organization and a local community, whereas the widely bounded areas refer to entire industries or society at large. While there is a geographic component to this analytical definition, the *essential* quality of the definition depends on whether it is a (practically) closed system or (practically) opens system. A closed system is one where all the rules are openly stated because all the elements are known and defined. Thus, it is bounded whereas an open system is one where the rules have not been fully defined yet because there are unknown elements that might enter the system. Hence the system is unbounded because we do not know the “edges” of it. Incorporating this systems theory idea into my framework is necessary because I noticed how important it is in determining and carrying out a strategy and the related activities. Namely, it is very different if you know the full scale of the stakeholder population versus having a "fog of war" effect and not seeing the full expanse of the terrain (Ostrom, 2010).

Increased awareness of the population which exists in a bounded area of activity reduces uncertainty by limiting it to classifying the existing members into the appropriate stakeholder category, as opposed to not knowing the size of the population itself, which is what happens in unbounded areas. I observed that the reduced risk allows the stakeholder manager to direct more available resources with less need for keeping reserves or emergency funds, and because of that is able to undertake more ambitious and complex (risky) actions with the resources that they commit. For example, when I knew that I had the finite population of a building to engage with, in order to raise the financial goal of $50,000 (Case 3), I could dedicate all volunteers and resources to specific activities in advance and minimize holding any resources in reserve. However, the same (bold) strategy could not be used when I was working with situations where the size of the population of potential stakeholders was unknown (Cases 1 and 3). So, some reserve resources had to be held just in case the terrain changed dramatically as a stakeholder population changed in size or composition.

It is important to note that social systems unlike systems in physical science are often subject to significant error and are prone to change and evolution. So, that is why I stated that the system is "practically" bounded or unbounded, or more accurately it is narrowly bounded or widely bounded. There is no situation where a stakeholder relations manager will have perfect knowledge of the stakeholder population, either because of measurement error (we make mistakes) or because the population changes (people quit or get hired). For these reasons I refer to areas of activity as widely or narrowly bounded, rather than the stronger contrast of bounded or unbounded.

The second axis in my matrix is the degree of *social structure* or hierarchy within the social context. There are numerous social sciences and humanities fields dedicated to studying, debating, and determining the degree of social structure and hierarchy. However, I will not investigate that theme here. My reason for using this theoretical concept in my framework is limited to its observed, practical application. Specifically, social structures showed me that in situations that are more “professional” there is less variability among stakeholder behaviour and the formal and informal (cultural) rules for engaging the stakeholders are more well understood. This increases predictability and thus reduces risk. In settings that do not have rigid social structures, the behaviour of stakeholders and the rules for engaging them is much more variable, making it more difficult to predict the outcome of various activities. For example, in a trade show that was accessible to the general public I observed how an individual approached me and my stakeholder relations team and exhibited hostile behaviour (Case 2). This unpredictability took us by surprise. By comparison, in my internal stakeholder management initiative (Case 3), which was in a highly structured context, I managed multiple stakeholder relations events, but I never encountered any comparable hostility even from stakeholders who were not open to being engaged. I think that the social structure that is imposed either through formal structures (employees in a workplace) or from informal reputational structures (industry representatives among their colleagues) enable easily understood and predictable social rules that reduces the risk for stakeholder management initiatives.

Combining the two dimensions of social context, I have developed the following four categories, with the highest risk value in the “society” context, the lowest risk value in the “organization” context, and medium levels of risk for the local “community” and “industry/sector” contexts:

- Advancing sustainability within an organization (narrowly bounded area, structured),
- Advancing sustainability within a community (narrowly bounded area, unstructured),
- Advancing sustainability within an industry/sector (widely bounded/unbounded area, structured),
- Advancing sustainability within society (widely bounded/unbounded area, unstructured).

7.4. Approach types

Through my observations and analysis in the four cases, I observed that there are four types of stakeholder engagement approaches which can be used individually or in combination with each other to advance a sustainable development effort. I developed these categories in a way that emphasizes their most salient and unique essential qualities, acknowledging that there will be some overlap between the categories and that in practice most stakeholder engagement efforts will involve multiple types of approaches.

Direct Engagement is often the standard definition of what fits within the existing stakeholder management, community relations, and engagement practice and theory (Albert Health Services. 2011). This involves going in the field and directly talking to stakeholders to inform them, solicit their support and use organizational skills to build and eventually mobilize a community of stakeholders. This is type of approach is often associated with activist grassroots movements and with corporate community outreach campaigns, where individual members of a community are engaged with the intent of organizing them into a cohesive group. However, I have used (and witnessed) this approach (being used) in internal organizational settings as well (Case 3), for example, canvassing individual employees for their donations.

Next, I have chosen to present *Issue Framing* as a distinct type of approach stakeholder management approach, recognizing that it is used at times on its own, by more organized ENGOs and industry associations (Cases 2 and 4), with the intent of informing and influencing public opinion, industry and academic thought leaders, or influencing government regulators and policy makers (Lee & Chang, 2010). Stakeholder management in general, as any organizational process, is underpinned by research and analysis relevant to the design and execution of its initiative (Yang, Shen et al., 2011). For example, on the target stakeholder audiences, and on engagement and communications strategies and tactics. However, I distinguish issue framing from the regular research and analysis and position framing, as a strategic end in itself rather than just a lower level component of executing a regular stakeholder engagement exercise. For example, when an organization dedicates significant resources to researching and framing a specific sustainable development policy and produces a professional and articulate white paper intended to shift industry and regulatory opinion (Cases

2 and 4), then that constitutes issue framing as a distinct stakeholder management approach. Rather, than just performing research and analysis to increase the participation of the stakeholder population (Cases 1 and 3). Under this approach type I also classify, lobbying of organizational representatives (stakeholders), because 'true' lobbying (including in the traditional context of government relations practice) requires a well-supported and articulated position, rather than just an "ask" for a simple outcome. It is important to note that this approach of issue framing, while usually associated with informing and persuading wider, external stakeholder audiences, can also be utilized with internal stakeholder audiences – especially if the organization is large and the sustainability issues are not properly defined or championed.

Third, I recognize that stakeholder management is a multidisciplinary process, and so I have also included *traditional marketing* as a distinct process within the stakeholder management tool kit. My expanded definition of traditional marketing includes not just marketing and advertising, but also media relations and public relations (PR), as well as trade shows and association meetings. I have combined these concepts under one concrete approach type because they all involve managing masses of external stakeholders using the full spectrum of traditional marketing and media tools that have in general been used by the private sector to achieve their various 'inform and influence external stakeholder' objectives. The difference that practitioners (advertiser versus a public-relations professional) of these various methods might draw between them (Cohen, 2012) can be ignored in this context because they functionally operate the same way from a stakeholder management perspective.

Finally, I added the stakeholder management approach of *new marketing*, which draws on the concept of the Internet of Things, the power of social media and the concept of online community creation and mobilization. All three of these concepts are enabled by the rise and proliferation of internet use. Individually they are interesting but together they form a powerful synergy that creates a powerful but not yet fully understood stakeholder management approach. The Internet of Things – a concept whereby everything is now increasingly networked with our internet devices (Westerlund, Leminen & Rajahonka, 2014) – and the widespread use and evolution of social media, allows an unprecedented level of immediacy in communication; personalization of increasingly salient stakeholder messaging; and depth, breadth and speed of analysis on stakeholder opinions. All of these benefits greatly strengthen and amplify the formation and mobilization of online communities, virtual groups that organize around themes or issues of interest (Diani, 2000), and can greatly support or frustrate stakeholder engagement efforts. Technology enabled, formal and informal online communities have an increasing capacity to organize autonomously across organizations, communities and society, with increasingly ability to overcome geographic, social and physical infrastructure barriers (Shirky, 2011). Originally used primarily by grassroots activist organizations – including ENGOs - because of its low costs, the new media approach is now being by industry and governments to inform and influence masses of external individual stakeholders. Furthermore, I have observed the experimentation of the use of this approach directed at informing and persuading internal stakeholders (Case 3) in the public service, as corporate e-platforms. For example, the organization's Microsoft Share Point site "Ecollab" was being used to form internal communities of practices that were created by management to support various own stakeholder management objectives.

7.5. Sustainable Development Stakeholder Management Framework

Combining all the elements that I have discussed above, I present the following visual instantiation of my proposed framework which would combine the various elements to create a simplified, but practitioner-relevant, explanatory framework diagram (see below).

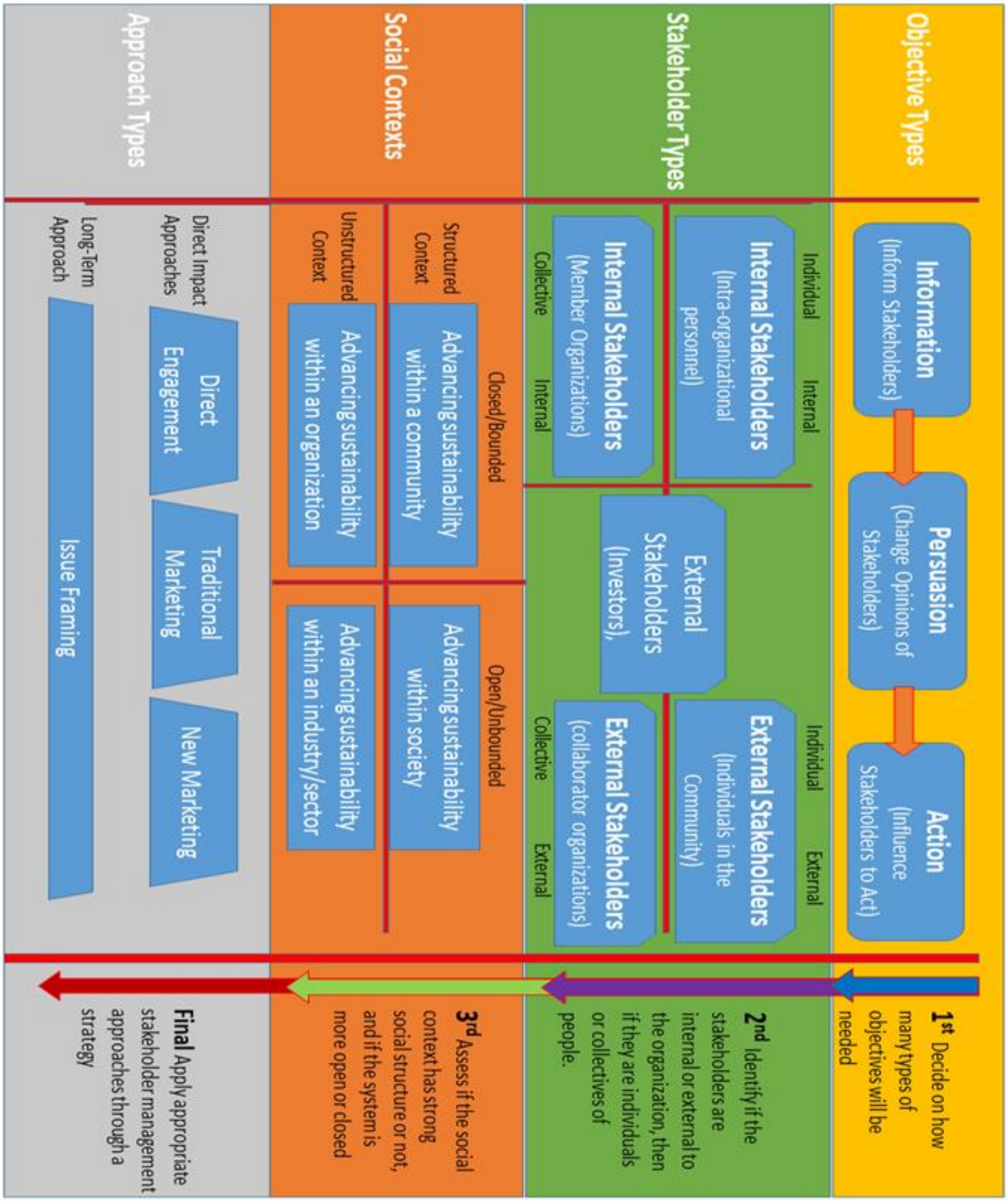

Figure 1. Stakeholder Management Framework for Sustainable Development.

Table 1. Categorization of the four cases through the Stakeholder Management Framework for Sustainable Development

Stakeholder Management Framework for Sustainable Development categories		MES Portfolio case studies			
		Case 1	Case 2	Case 3	Case 4
Objective Types	Information	X	X	X	X
	Persuasion	X	X	X	
	Action	X	X	X	
Stakeholder Types	Internal Stakeholders – intra-organizational personnel	X		X	
	Internal Stakeholders – member organizations	X	X		X
	External Stakeholders – investors	X	X		
	External Stakeholders – individuals in community	X			X
	External Stakeholders – collaborator organizations	X	X		X
Social Contexts	Advancing sustainability within an organization			X	
	Advancing sustainability within an industry/sector				X
	Advancing sustainability within a community	X			
	Advancing sustainability within a society		X		
Approach Types	Direct Engagement	X	X	X	
	Traditional Marketing	X	X	X	X
	New Marketing	X	X		
	Issue Framing		X		X

To show how the Framework would work in a practical context, Table 1 shows how I would categorize my four cases under the framework. Looking at the table, the value of the framework becomes apparent as the vastly different cases are easily comparatively analyzed against each other using the straightforward categorization process, with all the key elements relating to stakeholder management clearly represented at a higher level.

7.6. New generation Marketing

The framework can be used to categorize any stakeholder management initiative or campaign that support sustainable development. Furthermore, as particular instances are populated into this framework, additional comparative analysis can be performed between the cases and patterns might emerge as to the optimal and worse-possible stakeholder relations strategies and tactics as they pertain to specific configurations. The outcomes of such an analysis would be of value to stakeholder management practitioners and managers implementing sustainable development initiatives who would benefit from improved insights in terms of lessons learned and method optimization. As well as, various business theorists in the field stakeholder relations, who would benefit from increased systemization and empirical verification of the field.

8.0. Conclusion and Implications

With my framework created from the analysis of my experience as a stakeholder manager in a variety of roles that supported sustainable development initiatives I will conclude my paper by discussing what I see as potential implications of this portfolio, both for my academic and professional development, but also as a contributing piece to the theoretical field and practice of stakeholder engagement in the area of sustainable development. Through this brief discussion I will also address some limitations and suggest future directions for a comprehensive research program, which could be adopted by other environmental studies or business process researchers.

First, I want to address the question “how does this project contribute to sustainable development studies and practices”. Specifically, is there a deeper analytical or theoretical connection to sustainable development and environmental studies aside from just the content of the projects that I pursued in the making of my Portfolio? My answer is a resounding “yes”. The Faculty of Environmental Studies at York University did not aim to produce just academics in environmental studies or sustainable development, but leaders who can change the world and advance these topics from theories into practical solutions for business, effective campaigns for NGOs and public policy and regulatory prescriptions for government. The program aimed to inform, to educate, and to empower its graduates to make a real impact in the field. Stakeholder management is the optimal practice of that empowerment for advancing a sustainable development agenda. It is the most diverse tool available for winning the war of opinions, which is necessary to start directing society’s, industry’s and government’s resources towards addressing such complex, overarching and often divisive issues such as sustainability, pollution mitigation, or climate change in a constructive manner. In this regard, the process of applying stakeholder management in the broadest sense as I have defined it, creates in a way an overarching theoretical framework for practicing the art of creating social environments that are needed for sustainable development.

I will also try to address a similar but more technical issue - could my model be applied to any other type of thematic area (non-environmental or sustainable development themes) that require stakeholder management? Unfortunately, I must admit that it is quite possible that this is the case, however I need to emphasize two counterpoints. First, the potential versatility of my framework is not a bad thing in itself, as it is positive to see research from environmental studies guiding other academic and professional fields. Second, this framework clearly emerged from my professional and volunteer experiences. As well as academic and operational research in sustainable development and environmental studies. So while it is possible that it might not need to be linked to sustainable development, that assumption has not been tested in this paper.

Second, I would like to address the question: does this paper add anything new to the field of stakeholder management? My answer is again, a resounding “yes”. Stakeholder management models, including the Harvard model that started my inquiry into this topic, all utilize similar elements and borrow concepts from different fields of study, my model is no exception only that I made it as broad and inclusive of the theory and mechanics as possible, while still maintaining a focus on stakeholder management. My simplification of the theoretical categories I used and the fact that they are informed by other social science disciplines (the stakeholder management objectives are standard public relations and communications theory; the social contexts refer to social theory; the bounding references from game theory) allow my framework to be at the same time practical and integrative due to its interdisciplinary perspective. I think this is a significant contribution for a master’s paper, and it lays the foundation for more interesting theory building in the field of stakeholder management, for future researchers.

Third, I want to transparently address issues about the robustness of the outcome and the research itself. As the research is assembled through a portfolio of mostly primary research, which is designed on a qualitative, case-oriented methodology, there are serious questions if my framework can be applied in other stakeholder management initiatives directed at advancing sustainable development objectives. Due to the research design, I acknowledge that my framework would need to be tested by future researchers, probably by coding existing scenarios into my framework and applying quantitative analysis to them to see if the framework holds all the relevant elements and offers any valuable insights. As I mentioned in the previous chapter, my hope is that coding numerous cases might reveal certain patterns of activities which could inform superior stakeholder management tactics and strategies, but again this is out of scope of my portfolio paper.

Therefore, this portfolio shows how my experiences and academic projects in the MES program, through my Plan of Study, translates into innovative-practically and theoretically-relevant research supporting the application of sustainable development in real-world social contexts through stakeholder management practices.

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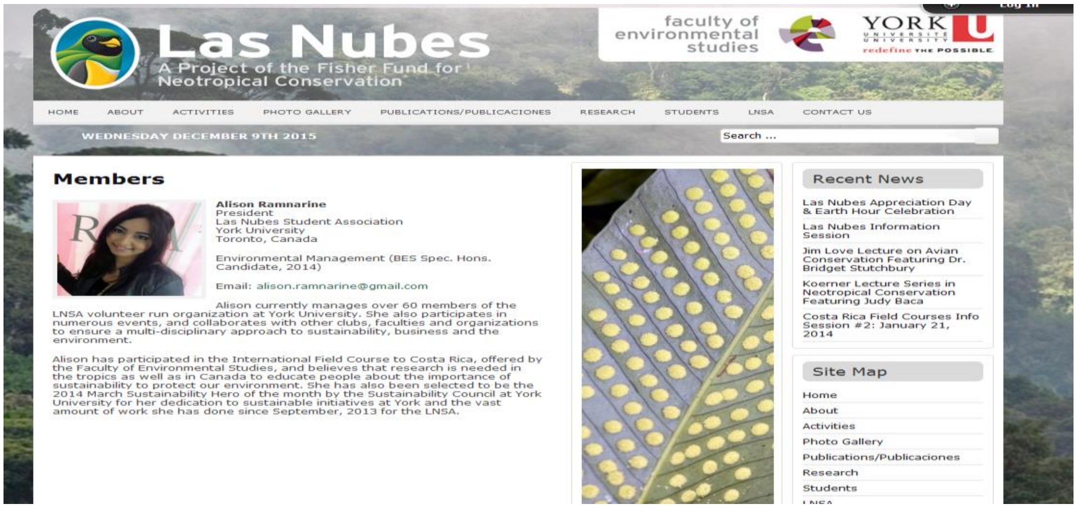
10.0. Appendices

Appendix A1 – Las Nubes Student Association – President Profile



Members

Alison Ramnarine

President
Las Nubes Student Association
York University
Toronto, Canada

Environmental Management (BES Spec. Hons. Candidate, 2014)

Email: alison.ramnarine@gmail.com

Alison currently manages over 60 members of the LNSA volunteer run organization at York University. She also participates in numerous events, and collaborates with other clubs, faculties and organizations to ensure a multi-disciplinary approach to sustainability, business and the environment.

Alison has participated in the International Field Course to Costa Rica, offered by the Faculty of Environmental Studies, and believes that research is needed in the tropics as well as in Canada to educate people about the importance of sustainability to protect our environment. She has also been selected to be the 2014 March Sustainability Hero of the month by the Sustainability Council at York University for her dedication to sustainable initiatives at York and the vast amount of work she has done since September, 2013 for the LNSA.

Appendix A2

LNSA – Community relations

Fisher Fund Wine Tasting and Auction raises $88,500 in support of York's Las Nubes rainforest

Alison Ramnarine in the Las Nubes rainforest

Last year, Alison Ramnarine travelled to Costa Rica for a field course. She planted trees, met local students and visited the farmers behind York University’s Las Nubes sustainable coffee. In early April, the fourth-year environmental student at York hobnobbed with about 100 of Toronto’s most generous wine collectors at the 12th annual Fisher Fund Wine Tasting and Auction, which raised $88,500 in support of ongoing research and conservation programs at York’s Las Nubes rainforest.

Jeff O'Hagan addresses guests at the wine tasting and auction

“I feel privileged to have been involved with the Las Nubes Project both in terms of the actual community work in Costa Rica and behind-the-scenes fundraising activities at York,” said Ramnarine, president of the University’s Las Nubes Students Association. “The Fisher Fund event is essential in enabling students to travel to Las Nubes and carry out much-needed research.” Hosted by the Woody Fisher Fund for Neotropical Conservation, the event is a major highlight for York each year and an important source of funding for the Las Nubes Project, said Jeff O’Hagan, the University’s vice-president advancement. “Not only have our supporters helped us educate the next generation of environmental leaders at York, they have collectively played a significant role in our commitment to sustainability,” he added.

Dr. Woody Fisher and Valerie Grant at the Las Nubes Wine Tasting and Auction

Dr. Woody Fisher, a Toronto physician who donated the Las Nubes rainforest to York in 1998, said the Las Nubes Project will help prevent such doom as described by E.O. Wilson, an eminent American biologist. "'If there is danger in the human trajectory, it is not so much in the survival of our own species as in the fulfillment of the ultimate irony of organic evolution: that in the instant of achieving self-understanding through the mind of man, life doomed its most beautiful creations,'" said Fisher, quoting Wilson. Nöel Sturgeon, dean of the Faculty of Environmental Studies, called the extraordinary research and conservation project of Las Nubes as "a tremendous source of pride for the Faculty of Environmental Studies and a unique resource for environmental education for York students."

Felipe Montoya-Greenheck

Led by Professor Felipe Montoya-Greenheck, York's Chair in Neotropical Conservation, the project is moving forward with the construction of the Lillian Meighen Wright Centre, which is scheduled to open in 2015. Thanks to significant donations of land the project recently received, Montoya-Greenheck said consolidating an eco-campus next to the Wright centre is now a possibility. "This has been a very exciting year for the project, which continues to expand in important ways," he said. "We have eight graduate students currently conducting research on multiple topics in the Las Nubes region, dealing with environmental conservation and improving community livelihoods and wellbeing." For many students like Ramnarine, the Las Nubes Project has created an opportunity on campus and beyond to promote sustainable ecological conservation and social sustainability practices in the biological corridor of the Las Nubes region. "Being there was like travelling back in time," she recalled. "The experience gave me a broader perspective on the need for world conservation. It opened my eyes to the possibilities out there and allowed me to better understand the impact directly."

Appendix A3

LNSA Community Relations and neo-tropical conservation

Fisher Fund event raises more than $107,000 for the Las Nubes Project

The Fisher Fund Wine Tasting & Auction offered collectors and enthusiasts an opportunity to sample and acquire new and rare varieties

For York University's top supporters and Toronto's most generous wine collectors, the Fisher Fund Wine Tasting & Auction is not only a unique chance to walk away with some of the world's most prized wines, it's also an important opportunity to come together in support of ongoing research and conservation programs at York U's Las Nubes Rainforest.

More than 100 guests did just recently when they gathered at the Sunnybrook Vaughan Estate for the 13th annual Fisher Fund event, which raised more than $107,000 for the Las Nubes Project.

FES Dean Noël Sturgeon

“By attending tonight’s event, you are helping our students and faculty to study, do research and take action for the protection of biodiversity and rural sustainability in the Las Nubes region in Costa Rica,” said Noël Sturgeon, dean of York’s Faculty of Environmental Studies (FES), to the event's attendees. “This extraordinary research and conservation project continues to be a tremendous source of pride for FES and a unique resource for our students’ environmental education.”

FES student volunteers pose with the Fisher Fund Wine Tasting founder. From left, Rupinder Assi (BES '09), Alison Ramnarine (BES '14), Woody Fisher, Binesh Lodhi (BES '15), Pamela Martinez and Craig Stephens (BES '15)

Guests bid on a wide array of fine wines and silent auction items and, for the first time ever, a paddle raise was included that alone raised an astounding $18,695 for the Lillian Meighan Wright Centre in Costa Rica. These funds will go towards outfitting the new research centre with much-needed furnishings. Thanks to a generous pledge by The Lillian & Don Wright Foundation, ground was broken on this facility in early April and it is expected to be completed in November 2015.

Felipe Montoya-Greenheck, York's Chair in Neotropical Conservation, who leads the Las Nubes Project; and FES Dean Noël Sturgeon

The Fisher Fund event also celebrated the recent landmark $2.5-million donation by longtime York advocates James and Joanne Love in support of environmental sustainability at York. The gift completed the funding for the James & Joanne Love Chair in Neotropical Conservation and provided major funding to endow the Fisher Fund for Neotropical Conservation, named in honour of Love's good friend Dr. Woody Fisher, a physician and tireless supporter of the Las Nubes Project, and the namesake of this annual event.

“We are deeply indebted to the thoughtfulness and generosity of the Love family – not only this year, but throughout the history of the Fisher Fund,” said Felipe Montoya-Greenheck, York's

Chair in Neotropical Conservation, who leads the Las Nubes Project. “The endowment of the Fisher Fund will allow us to increase our support for students learning about conservation and biodiversity through field courses, faculty research and the local community in the Las Nubes area.”

Jim Love (left) speaks with York alumnus Guy Burry (BA '82), past chair of the York University Alumni Association

Fisher, who was described by Sturgeon as a visionary whose support has transformed not only the Las Nubes corridor but the entire FES student experience, donated the Las Nubes Rainforest to York more than 17 years ago, in 1998. He was on hand for the event, which took place on April 16, and in his remarks he reiterated the importance of the Las Nubes Project.

Woody Fisher

“Shepherding biodiversity through the human pressures of the 21st century will require a shared vision for conservation and agriculture, one that simultaneously preserves species and ecosystem functions while also enhancing food production and human well-being,” Fisher quoted from a recent scholarly article. “I am confident that, with your support, we will succeed in this endeavour.”

Appendix A4 –

<u>My volunteer work with the Las Nubes Student Association</u>

Las Nubes Student Association, York University shared **Schulich Centre of Excellence in Responsible Business**'s **photo**.

October 2, 2013 ·

Thanks to **Schulich Centre of Excellence in Responsible Business** for hosting us at their annual COERB Event. Be sure to like their page and view their upcoming events.

COERB

Schulich Centre of Excellence in Responsible Business

October 1, 2013 ·

Thanks to the Las Nubes project for their colourful display. Be sure to buy a cup of Las Nubes coffee at the Schulich Timothy's. For more inform... Continue Reading

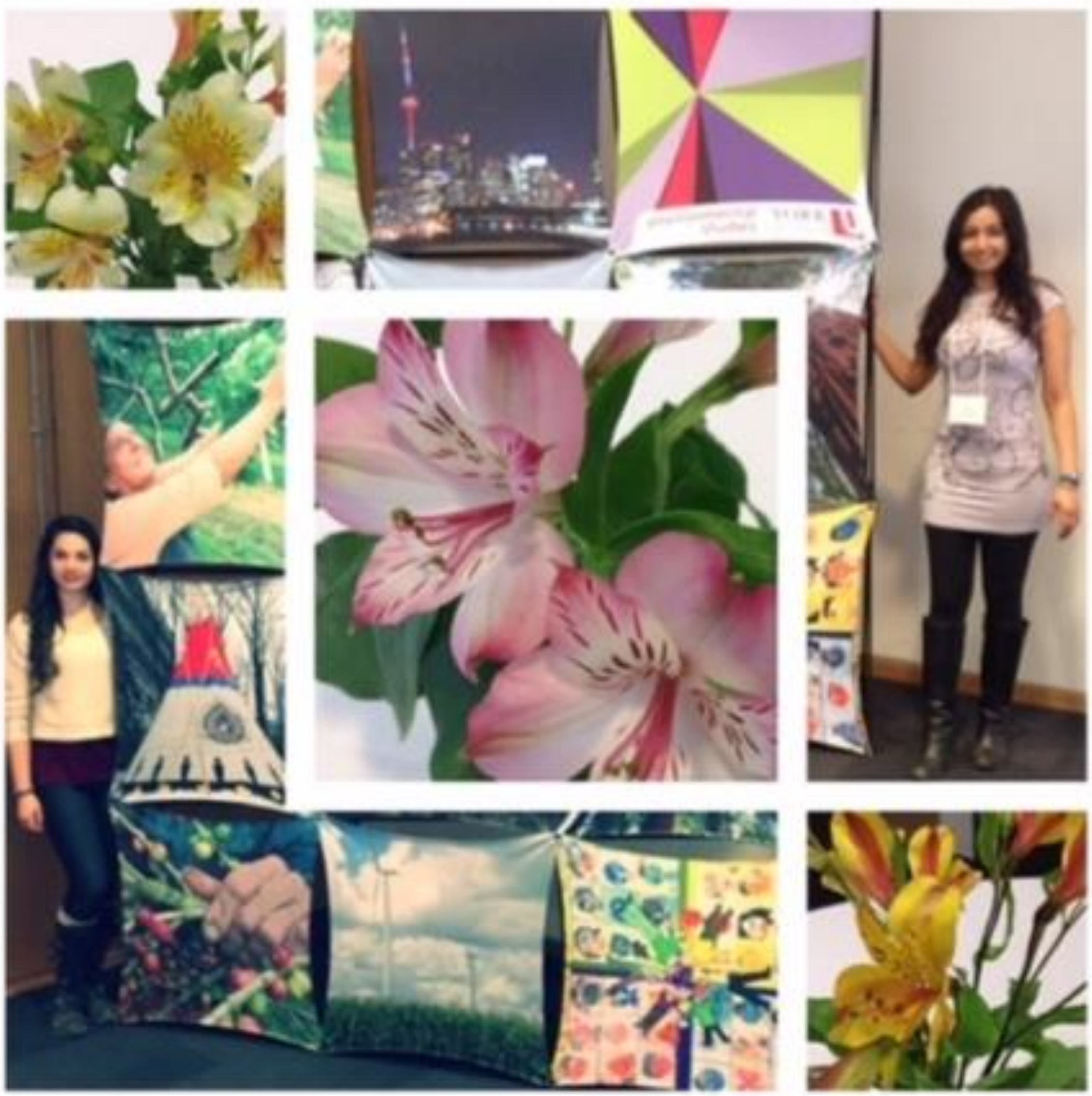
Las Nubes Student Association, York University shared a **post**.

March 25, 2014 ·

Alison Ramnarine with **Deanna Kathryn Curto**.

March 25, 2014 · Instagram ·

LNSA at the Jim Love Lecture featuring Bridget Stutchberry **#lasnubesyu**



Alison Ramnarine with **Deanna Kathryn Curto** and **Sarah Cole.**

March 19, 2014 ·

Las Nubes girls at the 2014 Koerner Lecture featuring guest speaker -Judy Baca.

Las Nubes Student Association, York University shared **IRIS - Institute for Research and Innovation in Sustainability**'s **photo**.

January 31, 2014 ·

IRIS - Institute for Research and Innovation in Sustainability ▶ Focus on Sustainability Film Festival - Oil

January 31, 2014 ·

You can get fair trade coffee at Las Nubas outside Nat Taylor Cinema!

York University - Faculty of Environmental Studies with **Eric Ta**.

November 19, 2013 ·

Las Nubes project is now fully stocked with chocolate ..... It's been a busy 2 weeks!!! Yummy! **#fairtrade #lasnubes #organic**

Las Nubes Student Association, York University with **Sarah Cole** and **2 others**.

November 14, 2013 ·

Las Nubes Student Association, York University added 6 new photos.

May 2, 2014 ·

LNSA at CASCA Anthropology Conference 2014! What a success!

Appendix B1

<u>My research based work as a graduate assistant for York University and TREC</u>

Metcalf Energy Conservation Program

Metcalf Energy Conservation Program

The Metcalf Foundation is sponsoring a research project between York University and TREC. The goal of the project is to examine uptake of conservation programs by an audience that is already interested in sustainable energy systems, as dictated through their investments in renewable energy co-operatives. All participants will be co-op members that self-identify as willing participants, by responding to an initial e-mail and newsletter sent out to SolarShare members. After members elect to participate, they will be treated as a group separate from SolarShare and be communicated to under the TREC banner.

Participants will be asked which conservation activities they currently pursue and to paint a general picture of their energy consumption. They will then be invited to examine a variety of energy conservation options available to them and encourage them to participate and record their successes. They will also be encouraged to discuss with each other, via an online forum, their challenges and experiences with these conservation programs.

Alison has been hired through her GAship with York University to main facilitator of this program. As facilitator she will fill the following roles:

i. Send out an initial e-mail inviting SolarShare members to participate, along with a link to an online survey that will confirm their participation
ii. Facilitate conversation and remind participants to provide feedback
iii. Handle inquiries from participants on the conservation program listed and connect members to relevant conversations
iv. Send final survey and collect data

This program will last just over 10 months after which we will have to report to Metcalf. If the program is successful in catalyzing action, we can share our experiences with other co-operatives.

There are a variety of other activities, including conservation activity selection, forum development, survey writing and feedback mechanism research being handled by other students at York University. The timing of the initial communication to SolarShare members is planned for the end of September.

Appendix B2

My research work for TREC and York University for the Metcalf Foundation

Renewable Energy Cooperative – Community Conservation Challenge web content

Introduction

Energy conservation is one of the most inexpensive ways in which you can manage your energy bills and save money, while also reducing greenhouse gas emissions (GHG). An immense amount of scientific information has shown that it is very important for us to act now to control how we use energy in our homes, as well as the quantities of energy we consume from unsustainable non-renewable resources.

What is causing climate change?

Unlike food and water shortages, climate change is a global issue because it is a major problem we are currently facing that will need everyone's efforts to help reduce the impacts. The main GHG is carbon dioxide (CO_2), which is released as a by-product of the burning of fossil fuels such as coal, oil, and natural gas. These GHGs, in addition to water vapour, trap heat that is given off from the surface of the earth and prevents it from being reflected back into the atmosphere. CO_2, especially, remains in our atmosphere for more than 100 years and its concentration has increased by over 50% in our atmosphere since before the Industrial Revolution.

How will climate change affect our health and environment here in Canada?

Even if we were to immediately stop the release of all GHG emissions, the impacts of climate change would still be felt for decades to come. Here in Canada, we are already observing the melting of permafrost and sea ice due to increasing global temperatures. The result of this warming will lead to an increase in the intensity and duration of heat waves, which will result in more deaths and illness from smog and heat stress.[1] A Harvard study in 2004 showed that higher CO_2 concentrations in our atmosphere will lead to higher rates of asthma attacks, particularly in children. [2]

Water levels in the Great Lakes and in forest ecosystems are expected to fall due to an increase in evaporation caused by warming, which will result in a decrease in our fresh-water resources. Canada's river basins are also expected to experience earlier melting of snow and ice. The spring snowmelt is a vital part of our hydrological system because in some areas, like the

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[1] White, R. R. (2010). *Climate change in Canada.* Ontario: Oxford University Press.

[2] Trasande, L., & Thurston, G. D. (2005). The role of air pollution in asthma and other pediatric morbidities. *Journal of allergy and clinical immunology*, *115*(4), 689-699.

Prairies, glaciers feed these river basins throughout the spring, summer, and fall. However, glaciers are already shrinking in size throughout the country, and some have even disappeared completely.

It is also expected that the impact of climate change would result in extreme weather events, which include occurrences of heavier rainfall, hail, tornadoes, hurricanes, and rises in sea levels. There will also be an increase in the risk and severity of forest fires and pest invasions. This can already be seen in British Columbia, where there has been a loss of over 50% of the province's snowpack. Warmer winters have also resulted in massive infestations of mountain pine beetles, which continue to destroy areas of pine forests equivalent to more than four times the size of Vancouver Island. [3] Environment Canada has also reported that the national average temperature for 2012 was 1.9°C above normal and the annual temperatures in Canada have been above normal since 1993, while experiencing a warming trend of 1.7°C over the last 65 years.[4]

Why conserve energy?

Energy conservation has now become a major priority for Canadians due to the increasing environmental, social, and financial costs that are associated with maintaining our current levels of energy consumption. Currently, our sources of energy here in Ontario, include a mix of electricity from renewable and non-renewable sources, natural gas, oil, propane, and wood. It is more beneficial to our health, future, and economy to save energy by implementing energy efficiency initiatives now to reduce the burdens we place on our energy supply infrastructure. Rather than, to build new or even maintain current sources of energy that contribute to GHG emissions. [5]

Conserving energy is one of the most inexpensive ways that allow us all the opportunity to effectively manage our energy bills, while simultaneously reducing GHG emissions. By the year 2050, Ontario has a goal of reducing their GHG emissions by 80% to the levels below that of 1990. Therefore, reducing overall energy consumption and improving energy efficiency from now is vital for heating and powering our homes to achieve this target.[6]

It has been examined by Natural Resources Canada that Canadian households represent about 17% of the total energy consumed in Canada, and this contributes to over 10% of our total GHG

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[3] White 2010: 2

[4] Environment Canada. 2014. "National Inventory Report: 1990-2012 Greenhouse gas sources and sinks in Canada. The Canadian Government's Submission to the UN Framework Convention on Climate Change", http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php

[5] Ibid, 3

[6] Ontario Clean Air Alliance. 2011. "An Energy Efficiency Strategy for Ontario's Homes, Buildings and Industries", http://www.cleanairalliance.org/files/ee.pdf

emissions.[7] This is mainly because our households use most of its energy for heating and cooling. Furthermore, a research study by the Committee on the Human Dimensions of Global Climate Change showed that 25% of the total energy consumed by households is used just for heating and cooling.[8] In addition, energy is also consumed in our homes for lighting, and powering various appliances.

What can you do?

The quantity of energy that our households consume all depends on the decisions we make every day and there are many effortless steps that people can take to contribute to reducing climate change. These involve reducing their dependence on fossil fuels by making personal decisions that improve our environment by reducing and monitoring their daily consumption of energy. Some of these simple steps encompass but are not limited to the decisions we make with respect to the temperatures we decide to set the thermostats in our homes, our consumption costs associated with fuel and electricity use, and improving the energy efficiency of our home.

Thus, it is of most importance that we reduce our overall energy consumption by focusing on energy efficiency and energy conservation practices at home to save on energy costs, and reduce our GHG emissions. According to the most recent data from Statistics Canada, there has been a rise from 2007-2011 of about 4% in household energy use across Canada with Ontario being among the largest consumers of this energy.[9] In Ontario, our energy consumption per person has also been found to be amongst the highest in the world. In other words, we consume about 50% more energy than someone from the State of New York, and about double the energy consumption of a person from the United Kingdom.[10]

Even though there have been many improvements to make modern day technologies more energy efficient, which has caused a 25% reduction in the energy used by some major household appliances, there has been an increase of 132% in the GHG emissions produced from the use of small appliances.[11] This is because the total energy consumed by smaller appliances

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[7] Hoicka C. 2012. "Understanding pro-environmental behaviour as process: Assessing the importance of program structure and advice-giving in a residential home energy evaluation program". Retreived from https://uwspace.uwaterloo.ca/bitstream/handle/10012/7143/Hoicka_Christina.pdf?sequence=1, October 28, 2014.

[8] Gardner, G. T., & Stern, P. C. (2008). The short list: The most effective actions US households can take to curb climate change. *Environment: science and policy for sustainable development*, *50*(5), 12-25.

[9] Statistics Canada. 2011. "Households and the Environment: Energy Use". Retreived from http://www.statcan.gc.ca/pub/11-526-s/11-526-s2013002-eng.htm, 11 October 2014.

[10] Ontario Clean Air Alliance. 2011. "An Energy Efficiency Strategy for Ontario's Homes, Buildings and Industries", http://www.cleanairalliance.org/files/ee.pdf

has been found to have increased by 148%. [12] In Canada, GHG emissions have risen by 6% over the last two decades from electricity use alone.[13]

What is the importance of this research project?

Thus, the main goal of the project will be to build, execute, and measure the effectiveness of a community-based conservation program with individuals who are conscious about energy sustainability and improving energy conservation. Completion of this study will help people to recognize how they can reduce Ontario's overall energy demands and GHG emissions, as well as advocating for energy conservation practices that help us to lower our energy consumption and lessen our reliance on unsustainable fossil fuels.

Your participation and feedback will also set the baseline for developing a Community Conservation Challenge (CCC), the first of its kind! The CCC's core focus will be on community-based, local renewable energy initiatives to establish connections and promote local/regional socio-economic development. This is where you come in as a study participant. As a willing participant you will be prompted to share your experiences, challenges, and concerns pertaining to energy efficiency and energy conservation practices you choose to implement at home. Your valuable participation will allow you to learn how best you can manage your energy bills and contribute your ideas with others who are part of this research project. The minimum time required would be less than an hour per week, which will end in April, 2015.

[12] Natural Resources Canada 2013, 23

[13] Natural Resources Canada 2013

Appendix B3

My research work for WWF-Canada.

Field Experience at WWF Canada

Field Experience Activity/Title:
What are the global best practices to increase public awareness for renewable energy potential? What are the key metrics that being used to communicate the renewable energy potential?

Term/Year: summer 2015
Credits: 6

WWF Canada Field Supervisor: Farid Sharifi
Email: fsharifi@wwfcanada.org
Phone: 416-489-4567 – x 7338

Field Experience Nature of Responsibilities:

Context:
Renewable energy is often referred to as having vast potential in Canada, yet little practical knowledge exists with respect to its 'realizable' potential, especially when compared to the conventional fossil-fuel based alternatives. The proposed 'Renewable Energy Opportunity Map' initiative, led by WWF and WISE, serves to address this comparative disadvantage and equip its audience with the necessary intelligence to inform and influence public policy and community development.

The intended audience of the renewable energy opportunity map fall into two categories: public and expert users. In order to engage and influence public, renewable energy opportunity map must "sell well" to the broad voting base in order to effect positive political leadership in this arena.

The main purpose of this research is to review global best practices in communicating the renewable energy potential to the public and identify those metrics that are important to the public (i.e. economic potential, environmental benefits, etc.)

Field Experience Outcomes:

- A report summarizing the review of global best practices in communicating renewable energy potential
- Presentation of key findings and recommendations

Appendix B4

Renewable Energy and Stakeholder Engagement Report

Renewable Energy and Stakeholder Engagement Report

Alison Ramnarine

1. Introduction

Stakeholder engagement is considered the most important process which is necessary for increasing the Renewable Energy potential within a community. However, it is has been identified as one of the most challenging barriers that prevents community energy projects within the renewable energy industry to take place. This is because without full acceptance and support from the local community these sustainable energy projects cannot survive throughout the long-term. Essentially, people's decisions are influenced by different behaviours. In the case of community energy planning, this becomes apparent in the amount of greenhouse gas emissions that are created during the extraction, transportation, and consumption of non-sustainable sources of energy within communities.

Even though people may be interested in sustainability and development they may not want to invest their time and money in these projects because they do not fully understand the economic, social, and environmental benefits they can receive. Thus, there are many sectors that can be targeted for community energy planning projects, which further explains why increasing public awareness through the process of stakeholder engagement is very important.

The key stakeholders include representatives from municipal departments (including, but not limited to, planning, energy, infrastructure, zoning, permitting); elected municipal officials; municipal/sustainability offices; the local LDC(s) and local gas utilities; or other utilities as needed; large institutional, commercial, and industrial (ICI) energy users; local development offices; Chambers of Commerce; business improvement organizations and local business groups; local non-governmental offices with an energy focus; sector associations; real estate sector; transportation sector; energy project developers; and local academic institutions where applicable.

2. Executive Summary

Through an assessment of the various methods that have been used to engage stakeholders, a resource guide can be developed for use by municipalities towards the successful completion of their community energy plan. However, to evaluate what methods of stakeholder engagement should be put into place in Saint John's River, it is important to examine municipalities that have already implemented successful CEPs through an evaluation of their case studies.

It has been identified that getting to know a system is the first step towards changing it. Municipalities and local communities need to take a systems analysis approach when trying to engage stakeholders at the start of the process needed to develop a CEP. Defining the main system functions, relevant participants and determining how they are related to each other can establish the formal and informal institutions that are needed to stimulate discussions in energy for the long-term. An outline of the quantitative data (statistics, historical data) and the qualitative information (values, norms, and viewpoints) attributed to these key stakeholders is also needed to map problems within the system. This will allow them to look beyond their expertise and perspectives to see how they can work together to change the system as a whole (Nevens, Frantzeskaki, Gorissen & Loorbach, 2013).

An analysis of 70 different cases from Europe, Asia and North America on a diverse group of university initiatives concluded that the motivational factors that cause them to participate in community energy processes are typically formed to enhance their research agendas. In addition, these university initiatives are able to provide urban sustainability opportunities not only across academic and non-academic sectors within the university itself, but with other external institutions (Trencher, Bai, Evans, McCormick & Yarime, 2014). This showcases an example of how communities should include the interests of key stakeholders to engage them achieving their renewable energy potential since the institution's mission has to be in line with the clearly defined objectives of the CEP. Other successful methods identified for engaging stakeholders have suggested that stakeholder influence on community renewable energy project plans take place at three distinct levels. These have been defined at the macro, intercommunity, and intracommunity levels (Ruggiero, Onkila, & Kuittinen, 2014), which is further explained in Table 1 (See Appendix).

Many municipalities that have become aware of the economic advantages for including an energy plan in their development strategy are learning the best practices to engage stakeholders in their communities. Additionally, the problems associated with energy, greenhouse gas emissions and climate change are all important issues that are included among today's economic development topics. Residents in the Saint John River can take advantage of all the economic benefits available to them by engaging their stakeholders to take the steps towards evaluating how energy is used in their communities and how that energy is generated for that same community. Municipalities that are not currently interested in incorporating a renewable energy plan in their development portfolio need to understand the economic advantages of doing so. They also need to clearly communicate with stakeholders to identify the areas where they can implement energy conservation and energy efficiency measures. This includes assessing the potential for renewable energy local generation, the application of smart grid technology in their communities, and they also need to take into account how they can contribute to strengthening the economy through their energy portfolio. This report includes a number of case studies to highlight successful methods used to engage stakeholders in implementing successful strategies towards renewable energy, energy efficiency, and energy conservation as these are all important towards realizing the renewable energy potential.

3. Methods to engaging stakeholders – Case Studies

3.1. Ontario, Canada

3.1.1. Burlington

The City of Burlington recruited key stakeholders and created a group that included members of many different institutions from the public and private sectors. These meetings were held consistently during all stages of the creation of the energy plan. These phases included discussions to state explicitly the objectives, goals and actions that would be needed to reduce the municipality's greenhouse gas emissions (GHG) (City of Burlingon, 2014). However, in order to clearly define the actions that would need to be taken to meet these goals, information and data had to be gathered to assess an estimated value for reduction in the amount of GHG emissions that was being produced. By doing so, they were better able to engage their key stakeholders from the start of the process because they already had the necessary information to help these stakeholders understand the importance of addressing energy issues at the local level.

To engage stakeholders the city of Burlington (2014) used the various communication mediums available and increased the number of people they were able to interact with to increase the effectiveness of different energy programs and initiatives. Some methods included using social media groups like Facebook and Twitter, school competitions, online forums and surveys in a timely manner. Stakeholders were identified and engaged in numerous discussions throughout the creation and drafting of the municipality's energy plan, and once completed, the final written document was shared publicly through online posting. In addition, the energy data that was gathered during the process was made open source and available to the public so that individuals and groups within the local communities could design new solutions to problems that were not yet identified by the City of Burlington.

An online interactive program was created and given a clear project name to help engage more community members to participate on different topics that were included in the City of Burlington's energy initiatives. The community was then given a period of six weeks to comment on the online program and suggest ideas to reach goals, discuss their concerns, and respond to questions relating to the energy project. About midway during the launch of the online program attention was drawn using a free speaker session, where the Mayor of Burlington invited an external speaker to discuss what community energy planning and renewable energy initiatives involve. The speaker also explained the opportunities and challenges that municipalities face in implementing energy projects across the country. This method helped to get people further involved and facilitate more discussions about Burlington's energy plan. It was also successful because it helped to engage stakeholders from the public sector, such as schools. During the stakeholder engagement phase, a video competition was set up and remained open for high school students for three weeks. Public voting was then open for another three weeks and the winners were given prizes for their achievements. These students were also celebrated at a town council meeting during the time that the winners of the school competition was announced (City of Burlington, 2014).

3.1.2. London

The key stakeholders in the City of London were recognized by targeting the priority sectors that can lead to economic growth, decrease municipal spending, and reduce GHG emissions. This is because from the start of the community energy planning process, the City of London identified the relevant stakeholders who had the potential for undertaking the leading roles necessary for carrying out effective community energy initiatives. The possibilities were explored for offering incentives to groups of different institutions within the same industry was also used a method to engage stakeholders (City of London).

Municipal staff took the initiative to directly meet with identified stakeholders by attending their meetings and events throughout the community in-person. They also hosted numerous workshops, seminars and conferences within their city of London. Staff used the existing relationships the City had with their local media to help engage the larger public and get them engaged. These methods included regular appearances on local television programs, local radio broadcasting stations, and newspaper and magazine articles (City of London).

Continuous outreach and education to community members continues to be an ongoing process as public education drives the success of energy programs within local communities. Once local stakeholders were identified within the community, their expertise in their respective industry was collected and directly contributed to develop and make the overall energy initiatives impact more efficient. However, in order to engage these stakeholders, the City of London had to ensure and offer policy support that established formal, ongoing commitment to ensure and then encourage energy efficiency and renewable energy discussion and project implementation. This policy support was also extended to include energy infrastructure, and the development of tools and programs created in collaboration with local utilities. Stakeholders need continuous support once they are engaged so that they can report their findings and themselves determine where improvements can be made. A progress record also acts as a starting point and helps ensure the best practices for other community initiatives.

3.2. Europe

In Europe, engaged municipalities have encouraged their local communities to reflect upon their impacts on both the national and international levels. They have also been encouraged to carry out community-wide self-assessments to develop plans that show their commitment to sustainable development within their own municipalities. As soon as these municipalities, institutions and regular citizens become engaged, they then collaborate with the local industries, businesses, schools, and other institutions to develop a written plan and start materializing it. Regular citizens have been found to play a fundamental part as their important contributions towards these energy initiatives can ensure more effective energy projects (ICLEI, 2011).

Engaging stakeholders have been very successful when institutions and individuals are held responsible for the decisions they make. This method has shown potential to dramatically change the way energy is generated, consumed and finally understood in relation to sustainability. With this frame of mind, cities such as those with Covenant of Mayors have been able to engage stakeholders since they were able to approach the entire task in a manner that permitted them to participate “without affiliation” (ICLEI, 2011).

Stakeholders that are identified as appropriate and effective were used to help develop a sustainable energy plan to include both energy and climate areas comprehensively. Accurate stakeholder representation is also a main component in engaging stakeholders as different societal groups are able to participate in the development and implementation as well. This method ensures that real concerns faced within local communities can be identified and prioritized, since different societal groups are able to help by providing their insights. Furthermore, this accelerates regular stakeholder discussions as it helps everyone work together and effectively communicate to identify potential conflicts quickly. These conflicts which arise can often be avoided or solved during the initial stages of the renewable energy planning process, as a feeling of ownership from stakeholder contribution has been successfully proven to be a key factor.

3.2.1. Halmstad, Sweden

For municipalities that are already known for their sustainable development objectives, sustainable energy strategies may not be included in actions for their long term plans. An example of how this barrier was overcome can be described by understanding how Halmstad was able to introduce energy plans in communities during the development of their region. As a result of a well-established tourist industry and a strong manufacturing industry, Halmstad’s transportation network infrastructure is setup to support the easy travel of people and goods in all directions. Renewable energy projects were relatively high on the agenda. However, these initiatives were usually undertaken by other key stakeholders such as the municipal utility and renewable energy project developers. Due to a lack of awareness in the community about energy issues, there was a non-existent understanding of the balance of energy use, and the transportation of clean energy. Nevertheless, the municipality had chosen to establish methods and tools to manage statistics related to energy issues. But, no energy efficiency measures, such as energy conservation, were taken into account. This caused the municipality to adopt different methods to engage their stakeholders in numerous sustainable energy dialogues (Johansson & Hammar, 2004).

Participation in various community energy associations and networks were found to be very influential in helping the municipality to assess what stakeholders were interested in, within the sectors that were prioritized in the region at the time. By assessing stakeholder perspectives, the sustainable energy dialogue’s language was shifted to include a focus from the stakeholder's point of view. Instead of the focus being the energy field, it was shifted towards the protection of the environment for tourism and the cost savings associated with it. The results of the process encouraged cooperation from a number of additional local stakeholders, including members of the public. By using the main priorities and language from the perspective of local stakeholders, energy projects were able to be developed surrounding these issues. Education of politicians and employees, together with public awareness, of environmental issues was also crucial to obtain support from local stakeholders. This method was successful because positive feedback from the community through numerous education initiatives was key for Halmstad's long term energy plans (Johansson & Hammar, 2004).

3.2.2. Kwidzyn, Poland

Kwidzyn is a municipality with a larger agricultural sector and economic centre, which includes natural sites like lakes, woodlands, and tourist attractions. The local communities had an increasing understanding of the importance of sustainable energy and energy conservation issues. However, the local municipal office did not have the funding resources to carry out community energy projects within their official municipal plan. Despite this, local municipal authorities were able to identify the importance of including social and economic development. There was a systemic approach to engage stakeholders to help identify the mission, priority, and goals of the municipality for future development, as well as, an analysis of their social and economic position. This promoted the creation of an elaborate document that was used to introduce the strategies for their energy plans throughout several communities (Lachowicz, 2004).

Workshops and seminars were set up to encourage local stakeholders to participate in actively planning the actions and methods that would need to be taken to achieve the results set out by the municipality. Consultation with a wide spectrum of members within the local communities was essential in engaging stakeholders as this led to a clear definition for achievable and effective objectives. This sustainable development strategy helped authorities to correctly identify the scope of the problems in their region. Municipal staff members also participated in training courses to help them gain a better perspective of the opportunities that they could achieve through innovative activities. The results of staff training helped individuals and groups to gain a better understanding of the solutions that were needed to solve their energy problems (Lachowicz, 2004).

3.2.3. Newark and Sherwood, UK

The internal structure of the local authorities was found to an integral part of the stakeholder engagement process for engaging the public in energy planning. An example of this can be seen in the case study of Newark and Sherwood. One method that was used to specifically engage local stakeholders was demonstrated through a number of pilot projects.

These projects began targeting first hand issues that the local community was facing in the housing sector. Successful implementation was achieved by using a group of engaged citizens in the pilot projects, which proved that energy efficiency can be both practical and cost-effective to benefit society, the economy, and the environment. In this case, the project leader had the skills and understanding of buildings, energy systems, and maintenance cycles to prove that improving the energy efficiency in homes can allow residents to live in warm, dry and healthy homes.

It was also found that it was necessary to have at least one person dedicated to the stakeholder engagement process for the municipality's energy plan because it maintained consistency and better facilitated how interactions occurred between local authorities and other key public and private local stakeholders. Eventually, the pilot projects encouraged other stakeholders to become engaged. This resulted in an energy strategy programme, which began in 1988. Further stakeholder engagement sessions showcased these social, environmental and economic benefits and also allowed the development of eco-entrepreneurship in the municipality. This eventually led to economic growth in a 'snowball-effect' or build-up of net-zero CO2 emissions projects which created strong alliances between key local stakeholders. Community awareness and interest was also increased. As well as, the local expertise and resources. This case was very successful in engaging key stakeholders because the language used in discussions focused on a carbon management based approach to provide the best value for all stakeholders (Isaac, 2004).

3.2.4. Vienna, Austria

Awareness campaigns were used to increase public understanding and interest in environment issues throughout the entire population of the municipality. This led to successfully developing a market for energy efficiency and renewable energy technologies in Vienna. Both internal and external stakeholders were involved in these projects because of the complex dynamics within the municipality. Relationships were fostered among all organizations that were related to Vienna such as decision-makers, administrative experts, external experts, and members of the general public. To enable stakeholder engagement, information presented about the CEP was very comprehensive. The objective was clearly defined and detailed coverage of the topics and sectors were communicated in a language that was easy to understand by the public. Both short-term and long-term goals had to also be presented to encourage stakeholder participation. Organizational issues and conflicts within the municipal management structure during the process were solved by including large discussion panels. These panels allowed experts who could offer their advice and some insights into their experiences with the entire energy planning process. This led to an increased level of commitment and support from municipal experts and administrative departments to improve their collaboration efforts for achieving agreed upon energy objectives (Fohler-Norek & City of Vienna, 2004).

3.2.5. Velingrad, Bulgaria

The strategies involved in implementing CEP initiatives in Velingrad were included by following the guidelines set out by Local Agenda 21, which is a process aimed at achieving sustainable development at the local level through collaboration between municipal authorities and their local communities. Discussions led to the creation of a Working Group, which was comprised of key internal and external stakeholders. This caused stakeholders with technical expertise to be included and supported by the Velingrad, which had already developed and implemented their energy projects. Municipal staff's enthusiasm and commitment to completing the planning process was also important to the success of the implementation of renewable energy and energy efficiency projects within the local communities.

Information had to be gathered to understand the problems being faced by the local communities. Two training sessions were held to help participants understand the importance of how and why information was needed, as well as learn the tools and methodologies for data collection. These sessions also demonstrated how the process of identifying and prioritizing energy efficiency and renewable energy was done so that participants could better understand the local energy situation and be empowered to help identify opportunities. Most of the efforts made were to raise awareness and help stakeholders in the local community understand the local economic, social, and environmental benefits they would receive in the long term through continuous participation in the energy planning process. Success stories from other municipalities in the region were also continuously shared to encourage more participation from local stakeholders (Velingrad Municipality, 2004). This working group was very successful because it helped engage local stakeholders and there was a good representation of the wider community beyond the boundaries of the municipality.

3.3. United States of America

3.3.1 Colorado

Some energy planning strategies which have been implemented in Colorado are aimed to get the involvement of numerous communities at the same time, which represents at least one million people, to achieve a minimum of at least a 60% reduction in carbon dioxide emissions. However, instead of limiting the resources to specific communities within their own municipal borders, they are systematically developing tools and resources to help more communities develop towards a cleaner energy future. These have already been used by over ten communities to encourage the replicability of their community energy system transformations in terms of scale and capacity. Partnerships have also been established and expert advice and resources have been given to five of the local leading community change groups (Rocky Mountain Institute, 2014). This empowers them to be more strategic since targeting institutions that are already essential parts of the community can harness the interests of other stakeholders who can become further engaged in the energy planning process.

Targeting leading institutions within local communities can allow them to network with and engage other stakeholders to increase the amount of accessible resources they would not have otherwise had to pursue energy projects and initiatives. For example, large institutions such as universities bring needed change much quickly. Therefore, they have also partnered with at least six of the leading university "leaders" to provide guidance, tools, processes, and the know-how to get one hundred other universities to commit to reducing their carbon emissions by 50%.

In Colorado, the energy planning process involves trying to bring together a diverse mix of stakeholders by encouraging the ones in their communities that are already set up for creating change across municipal boundaries to themselves, adopt, and act upon an action plan. The aim is to achieve their climate neutrality target. As well as, implement at least one proven energy retrofit project that saves a significant amount of energy, and be used to set a precedent for other institutions to follow.

Sharing of information is crucial as it helps make decisions easier. Programs are also being created such as the University Carbon Reduction Accelerator (DE-CARB) working groups. This program starts off with about 100 universities participating in workshops and webinars. In this case, a number of six webinars have been set up for at least 250 schools to view (Rocky Mountain Institute, 2014). Webinars are becoming one of the most important methods used to target wider groups of engaged audiences across many different communities.

4. Recommendations

Stakeholders can only become engaged in the energy planning process to include renewable energy, energy efficiency, and energy conservation initiatives after local problems within the communities have been identified through information collection and analysis. In Ontario, there exists a Municipal Energy Plan (MEP) program that funds a limited number of activities for engaging stakeholders. These include room rentals and refreshments for stakeholder sessions. As well as, local travel costs which are directly relate to the stakeholder engagement process. However, within the six month time frame given for this process to be completed some local municipalities do not have the funding resources to dedicate and ensure a staff member works full-time to seek out and engage potential stakeholders. Also, this becomes a time consuming process for smaller municipalities and communities. The case studies presented in this report have shown that methods beyond meeting sessions need to be included to engage stakeholders to participate in the entire energy planning process.

In the Saint John River, a relationship approach to engaging stakeholders from the start ensures that local strategic partnerships can occur between the public, private, and volunteer organizations towards achieving local sustainability. Having a number of different established sustainable groups enables stakeholders to have some guidelines that can allow the language of discussions to take on a carbon-based or conservation approach since it is related to climate change, which is already a driver for sustainable energy.

Organizational structures also need to be addressed as it has been identified as an important feature necessary for the success of local energy projects and initiatives. This is because local governments should appoint a sustainability officer who would be responsible for communications, stakeholder dialogues, reviewing reports and ensuring that there is continuous coordination between district and county strategies (Isaac, 2004). Staff should contact leading members within institutions in the communities that create change so a link can be established by a stakeholder who is already has deep-rooted relationships within other stakeholders in the community. School competitions have also been successful in engaging stakeholders in short time frames.

Only communities that are aware of the probems, capabilities, and potentials of having energy plans will be able to see the possibilities of energy planning in the community and support the development. Through communication with local stakeholders a framework can be built that focuses within the context of the local perspective so that it is easier to attract other involved parties and allocate resources effectively. Municipalities need to perform an assessment to identify a list of the possible key stakeholders in their community according to their political, economic, and social interests in the project. A record of characteristics for each stakeholder should also be included in this assessment such as their knowledge and skills, advantages and disadvantages by either being in the project itself or its possible outcomes. Municipalities also need to identify opposing groups to understand the challenges that may arise to delay projects within their communities. These brainstorming sessions have been found to be most successful when both individual and group brainstorming sessions are combined (Dvarioniene et al., 2014).

Key stakeholders become more engaged to participate in current energy issues by listening to inspirational energy success stories that showcase speakers and representatives from real community energy projects. They need to have an example from an expert who can explain to them how the challenges can be overcome, how the process can begin, and keep the focus on the economic and social benefits that can be gained from including energy projects in their community. For example, the city of London has established a ReForest London program that promotes tree planting by seeking industrial land owners who are able to plant trees on their property. Land owners are also provided assistance in the event that they need to find tree planters within their locale. Incentives similar to this need to be included as these encourage further participation from different groups of stakeholders within the same industry.

There is a considerable amount of information available which cannot be understood by everyone so it is important to engage stakeholders using common or plain language that can be understood by the larger public, especially those who are not familiar with energy concepts. However, this communication language should also be tailored depending on the perspectives or industry of the stakeholder as it helps establish a relationship that can eventually lead to them directly engaging in the energy process. Local media should also be used to communicate information clearly and facilitate stakeholder engagement. Schools are being encouraged to include sustainability in their curriculum by creating fun and innovative programs where students from as young as ten years of age can learn from experts in the areas of climate protection, energy, and the environment. To ensure continuous engagement in topics relating to energy conservation and renewable energy teachers are also given training sessions to keep them aware of the ongoing discussions surrounding energy within the political context so that they can learn new methods to integrate sustainability into the courses (ManagEnergy, 2014).

Communities can work together, especially the ones that are in close proximity to each other and share their expertise, knowledge and grow their economy together. There are currently twenty-four municipalities in Ontario that have adopted the ‘culture of conservation’ guidelines set out by the Ontario Power Authority (OPA). This list includes municipalities that have officially appointed a local representative(s) to actively contribute to encouraging energy conservation within their municipality (OPA, 2014). In the Saint John River, stakeholders need to also understand that their energy plans can include any measures that that they consider necessary. Some of these can include encouraging people to change their behaviours towards energy conservation, energy efficiency, and local energy generation that would help them get closer to a goal of energy security, improvement of the land-use in their community and how it relates to growth, and transportation (City of Burlington).

Stakeholders become quite engaged in the community energy process when they see the results first hand from either a presentation by an expert, or a pilot project within the community. When people are inspired by the successful results that have been achieved by other communities they start learning how they can start similar projects in their communities to achieve positive results. For instance, stakeholders need to know that they will have support from local authorities throughout the implementation of their renewable energy projects. It was also identified during the local sustainable energy planning process that a monitoring and evaluation process needs to be in place to help monitor progress towards meeting objectives. This is because it is usually difficult to measure and report to the community and other key stakeholders the impacts of the sustainable energy interventions which have been implemented (Velingrad Municipality, 2004). Continuously reporting success stories from the community can result in other stakeholders becoming engaged in the community energy planning process.

Considering that there is a lack of a proper communication network in the Saint John River, and government agencies are heavily relied up for sources of information, the outreach and education activities can be a medium to provide important sources of information as well.

6. Conclusion

Stakeholder concerns need to be addressed from the beginning and they need to know that they play very important roles in accelerating t renewable energy projects within their community. They need to feel ownership and responsibility but not feel overwhelmed by the process needed take place in order to implement an energy project. There is no single list of methods that will be applicable to all community stakeholder engagement processes in the Saint John River. This is because engaging stakeholders depends on the context of the industry, stakeholder perspectives and community problems that need to be addressed. Stakeholders in the public and private sectors are important because they are able to implement actions to ensure the success of energy initiatives and projects within communities. These stakeholders have been found to be more engaged when they benefit directly from the project through cost savings, increased revenue or other incentives. Local municipal staff should include at least one person in their office who is dedicated to engaging stakeholders. This ensures consistency in information and tracking of progress reports, and maintains a constant point of communication between stakeholders.

7. Appendix

Table 1. Indicates the macro, intercommunity, and intracommunity outcomes stakeholders can influence if they feel they will be harmed in the process of a community renewable energy project.

Summary of the findings of the study.

	Stakeholder	Process		Outcome	
		Supportive	Hindering	Beneficiary	Harmed
Macro	Government	Available funding Feed-in tariff	Difficulties in accessing funding Unsteady policy framework	Increased RE capacity	
	Energy supplier	High energy price			Lost market share
	Network operator	Lack of energy infrastructures (indirect)	Delayed connection to the network	Network connection fee	Affected grid stability
	Commercial developers	Interest to cooperate	Interest to compete	Income from partnerships Enhanced reputation	
Intercommunity	Nearby communities	Shared knowledge and experience		Shared knowledge and experience	
	Intermediary organizations	Advice and guidance			
Intracommunity	Local community (at large)	Availability of material resources Community ownership General positive attitude	Scepticism Lack of trust	Economic development Self-sufficiency Identity Sustainability Start-up capital	Shattered community cohesion Generation curtailments
	Local businesses	New business opportunities	Opposition	Income from new business opportunities	Competition
	People living near installations		Opposition		Impact on health due to noise Affected value of the landscape
	Local champions	Skills and competences Individual values	Lack of skills and competences	Learning Income from co-ops	

(Source: Ruggiero, Onkila, & Kuittinen, 2014)

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Appendix B – My work with TREC and SolarShare

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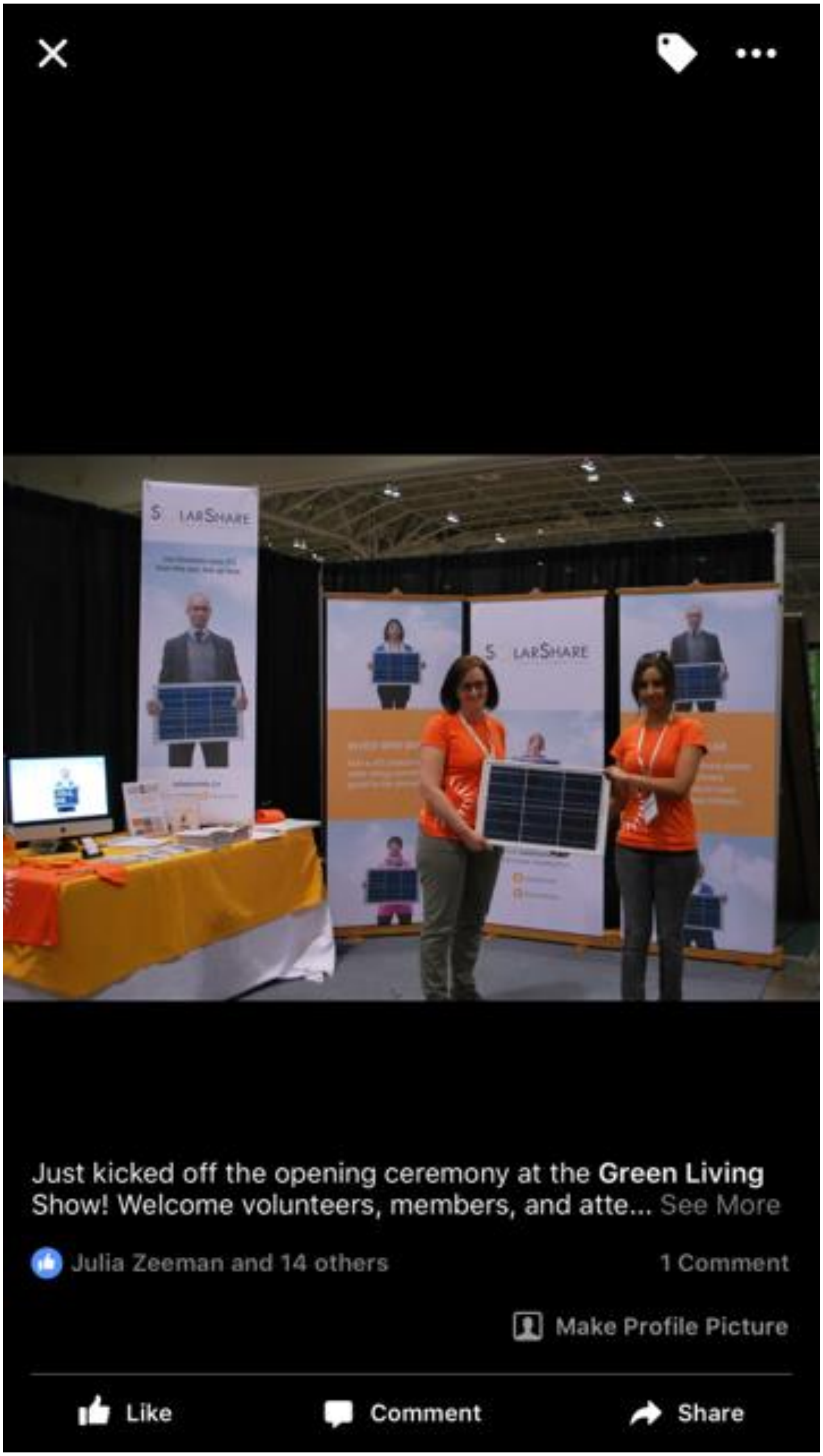
Just kicked off the opening ceremony at the **Green Living** Show! Welcome volunteers, members, and atte... See More
Julia Zeeman and 14 others
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Like
Comment
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So good to be here today! — with Alison Ramnarine at Port Credit Farmers Market.

Organic Lifestyle, Ariel AriVal, Hamid Ahmed Khan and 56 others like this.

2 shares 2 comments

Terry Hill My birthplace. Been right where she's standing.
July 13, 2014 at 11:28am · 1

Alison Ramnarine It is a very beautiful place Terry Hill ! I am so glad I was able to visit Port Credit.
July 13, 2014 at 2:06pm · 1

Appendix C

Recognition of my work for Environment and Climate Change Canada

Environment Canada   Environnement Canada

Director General
4905 Dufferin Street
Toronto, Ontario
M3H 5T4

January 5th, 2016

Ms. Alison Ramnarine
Junior Science Program Officer
Cloud Physics and Severe Weather Research
4905 Dufferin Street
Toronto, Ontario
M3H 5T4

Alison

Dear ~~Alison Ramnarine~~,

I wish to recognize your exceptional efforts and leadership during the 2015 United Way Charitable Campaign within Environment Canada (Downsview). Your dedication, initiative and team spirit was greatly appreciated and contributed to the success of the Campaign.

This recognition entitles you to choose a gift of your choice at **Level 5** from our selection of instant awards found at the iBoutique http://iboutique.ca/ .

Attached is an order from with instructions on how to select your award. Once you have completed the form, please email it back to the following address: ec.reconnaissance-recognition.ec@canada.ca, and they will place the order for you.

Once again, congratulations on receiving this award!

Sincerely,

Charles Lin
Director General
Ontario Region

Canadä

Canada
Thanks You

Alison Ramnarine

The Government of Canada wishes to congratulate you on your Level i5 Instant Award.
In honour of your achievement, a tree will be planted in Ontario by Tree Canada.
The planting of trees symbolizes Canada's commitment to a green and
sustainable future for all Canadians.

Congratulations!

Michael Rosen
President of Tree Canada

TreeCanada

Growing better places to live

Environment Canada / Environnement Canada

2016

ECAN Peer Recognition Award
Prix de reconnaissance par ses pairs du RIEC

Awarded to / Remis à

Alison Ramnarine

ECAN congratulates you and thanks you for your excellence and dedication to making Environment and Climate Change Canada a better workplace.

Le RIEC vous félicite et vous remercie de votre excellence et dévouement à faire d'Environnement et Changement climatique Canada un meilleur milieu de travail.

ECAN Environment Canada Action Network
Réseau initiative d'Environnement Canada RIEC

Canada

Environment Canada / Environnement Canada

Alison was a co-chair of the Downsview GCWCC effort Her dedication, upbeat demeanor and positive attitude make her a great colleague to work with. Despite some challenging circumstances, she persevered and completed the project, meeting the fundraising goal. Her efforts were greatly appreciated.

Thank you for your dedication and creativity in planning, organizing and executing the events commemorating Black History Month 2016 at Downsview. Black History Month celebrates diversity, multiculturalism, heritage, and history. Thank you for making this year's program a success.

Nominated by / Candidature soumise par:

The person who nominated you wishes to remain anonymous.
La personne qui vous a mis en candidature souhaite rester anonyme.

February 2016 - Février 2016

ECAN Environment Canada Action Network
Réseau initiative d'Environnement Canada RIEC

Canada

THANK YOU for being a star in someone's life.

MERCI d'être l'étoile dans une vie.

Alison Ramnarine

Coordinator

Vince Pranjivan
Chair, Federal Government, 2015 Campaign Cabinet
United Way Toronto & York Region
Président, Division du gouvernement fédéral
Cabinet de la campagne de 2015
United Way Toronto & York Region

Sharon DeSousa
Regional Executive Vice President - Ontario
for the Public Service Alliance of Canada
Vice-président exécutif régional - Ontario
pour l'Alliance de la Fonction publique du Canada

Peter Gilkinson
Director – Ontario Region
The Professional Institute of the Public Service of Canada
Directeur - Région de l'Ontario
L'Institut professionnel de la fonction publique du Canada

GOVERNMENT OF CANADA WORKPLACE CHARITABLE CAMPAIGN
CAMPAGNE DE CHARITÉ EN MILIEU DE TRAVAIL DU GOUVERNEMENT DU CANADA

This campaign is managed by United Way/Centraide.
Cette campagne est gérée par Centraide/United Way.

Government of Canada
Workplace Charitable Campaign

Campagne de charité en milieu de
travail du gouvernement du Canada

December 15, 2015

Alison Ramnarine
Environment Canada
4905 Dufferin St
Toronto, ON M3H 5T4

Dear Alison,

We want to thank you for your dedication and enthusiasm in leading Environment Canada's Government of Canada Workplace Charitable Campaign this year. The generosity of you and your colleagues is changing lives every day all across our region.

I really enjoyed having the opportunity to meet you and your team and participate in your campaign kick-off, ambassador training session and wrap up event. Thank you for inviting me to speak with your team. I hope you had as much fun running the campaign as I had supporting you!

It has been a pleasure working with you. Together we are helping to build stronger, healthier communities.

Thank you for your support.

Sincerely

Joanna Phongsy
Sponsored Employee

Anita McMaster
Manager, Resource Development
United Way Toronto & York Region

P.S. Joanna Phongsy's last day with United Way is Thursday, December 17. If you have any questions or additional funds to remit, please contact Anita McMaster at 416-777-1444, ext. 335. For your information, United Way offices will be closed from December 24 to January 1 inclusive.

Appendix D

My work and research contributions to Packaging Consortium

PAC - Canadian EPR Updates Summer 2014 - Issue 2

Introduction
PAC NEXT is proud to present this second quarterly issue to provide members with updates on Extended Producer Responsibility (EPR) legislation for Printed Paper and Packaging (PPP) in Canada.

Industry-Financed Recycling Services Begin Across BC
On May 19th, a milestone was reached for recycling in the province of British Columbia as organizations, collectors and communities worked to deliver a blue box residential recycling to service 88 communities comprised of 1.25 million households, totaling 185,000 tonnes of packaging and printed paper material after it has been collected from curbside households, multi-family buildings and depots across the province. The aim is to increase recycling rates from 53% to 75%, as twenty communities including 13 BC First Nations will be receiving curbside blue box recycling for the first time.
Green by Nature EPR (GBN), the organization responsible for managing the processing and marketing of PPP materials, engaged nearly 30 subcontractors - leaders in recycling in their local communities - to be part of the team to manage the post-collections system for MultiMaterial BC's (MMBC) residential packaging and printed paper recycling program.
Beginning on May 2nd, MMBC launched an advertising campaign to educate people about the new program and the new materials that can be recycled, including milk cartons, plant pots, aluminum foil packaging, aerosol containers, and plastic and paper take-out drink cups.
Advertisements appear in local newspapers, on radio and TV, and online. Residents are encouraged to visit http://www.RecyclingInBC.ca to find out more about what they can recycle in their local community.

Membership Agreement for Multi-Material Stewardship Western Now Available
As a business resident or a voluntary steward in Saskatchewan, wanting to participate in MMSW's approved packaging and printed paper program requires to sign a membership agreement with Multi-Material Stewardship Western (MMSW). MMSW has made the Membership Agreement available on their website. MMSW held a webinar on June 6th to provide reporting guidance for Saskatchewan businesses and help stewards prepare their material reports. The webinar recording, Q&A and presentation are available here.

Stewardship Ontario Releases Program Performance and 2013 Annual Report
Stewardship Ontario released numbers for their program performance and funding, as well as expenses. In 2013, Stewardship Ontario's Blue Box program collected over 890,000 tonnes of recyclables. Businesses pay 50% of the costs of the Blue Box Program for residential recycling, and in 2013 alone, they contributed nearly $140 million towards recycling programs in Ontario.

For more information, or to review the achievements of Stewardship Ontario in 2013, read their Annual Report, available at http:// 2013.stewardshipontario.ca.
Waste Diversion Ontario (WDO) agreed to Stewardship Ontario's request to submit to a formal dispute resolution process (the "DRP") with respect to Stewardship Ontario's Management Services Agreement with Canadian Stewardship Services Alliance (CSSA). Read the letter from the WDO CEO to the Stewardship Ontario Managing Director that outlines the next steps in the DRP here.

Latest News from Éco Entreprises Québec
ÉEQ announced that they will take part with researchers from CREATE (Centre de Recherche en économie de l'Environnement, de l'Agroalimentaire, des Transports et de l'Énergie) regarding a comparative study on the effectiveness of deposit vs. the curbside recycling systems relating to the recovery of drink containers. ÉEQ recently updated their website and also received first prize in the Innovation category in the Entreprises citoyennes competition organized by Novae for the creation of their OptimEco.ca portal. According to ÉEQ's Schedule of Contributions, reporting for 2014 begins this month where dates can be found here.

Nova Scotia Environment Proposes Changes to Solid Waste Regulations
Nova Scotia Environment is proposing changes to the provincial solid waste regulations to keep the programs efficient and sustainable, to provide a high level of environmental protection and to create economic opportunities in the province. The public discussion paper titled, 'Revising Our Path Forward: A public discussion document' can be accessed here. Comments on the proposed changes can be made via their online consultation form and will be accepted until August 1, 2014. Note that PAC NEXT has provided input and in particular, highlighted the principles of the PAC NEXT Way - see video link here.

Canadian Stewardship Services Alliance Provides Useful Tools to Submit Reports
The Canadian Stewardship Services Alliance (CSSA) provided key dates to submit reports for the various stewardship programs across Canada. In addition to the National Material List and Portal User Guide, the CSSA developed the National Guidebook titled, 'A Guide to Help Businesses Meet Their Packaging and Printed Paper Recycling Obligations in Canada' to provide helpful hints and tips for reporting.

Helpful Links
BC http://multimaterialbc.ca/notices-archive
Quebec http://www.ecoentreprises.qc.ca/news-andevents
Alberta http://esrd.alberta.ca/waste/ https://www.recycle.ab.ca/public-policy
Manitoba http://stewardshipmanitoba.org/mmsm/whatsnew/
Ontario http://www.stewardshipontario.ca/latestnews/ http://www.wdo.ca/news/
https://www.rco.on.ca/wra-overview-- timeline
Saskatchewan http://www.mmsk.ca/notices-alerts
Nova Scotia http://www.novascotia.ca/nse/waste/
Canadian Stewardship Services Alliance http://www.cssalliance.ca/latest-news

Contributors:
Alison Ramnarine
Alan Blake
Rachel Morier

Disclaimer
The conclusions and views expressed in this report do not necessarily reflect the views of every PAC NEXT Member Company or Affiliate.

Appendix D2

Stakeholder Relations report on the packaging industry and marine litter

Marine Litter and the Role of the Packaging Industry

March 2014

INTRODUCTION

The PAC NEXT Leadership Council agreed on December 4, 2013 to inform stakeholders in the packaging value chain about the issues and challenges related to marine debris and its relationship with packaging and litter. The purpose of this executive summary is to create awareness of marine litter and the general issues associated with public and accidental littering, pollution in ocean gyres and Great Lakes, and efforts to reduce packaging waste from industrial operations, e.g. Operation Clean Sweep®.

WHAT IS MARINE LITTER?

Marine debris is defined as any "persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes."

Packaging and plastics are integrated into daily human activity and can enter into the marine environments directly or indirectly and in numerous ways through improper and ineffective waste management, intentional or accidental dumping and littering at sea or on shorelines, or carried by storm water runoff. Marine litter adversely affects marine ecosystems. It has environmental, health and safety impacts on marine wildlife and coral systems. Marine litter also threatens marine-industries such as fishing and aquaculture.

HOW DOES PACKAGING PLAY A ROLE IN THIS ISSUE?

Studies reveal that a significant amount of marine debris is comprised of plastic. Plastic marine debris is frequently from packaging litter as shown in the Ocean Conservancy data table below that lists several packaging types found over a 25-year span.

Top 10 Debris Items

RANK DEBRIS ITEM NUMBER OF DEBRIS ITEMS PERCENTAGE OF TOTAL DEBRIS ITEMS

1 Cigarettes/Cigarette Filters 52,907,756 32%
2 Food Wrappers/Containers 14,766,533 9%
3 Caps, Lids 13,585,425 8%
4 Cups/Plates/Utensils 10,112,038 6%
5 Beverage Bottles (Plastic) 9,549,156 6%
6 Bags (Plastic) 7,825,319 5%
7 Beverage Bottles (Glass) 7,062,199 4%
8 Beverage Cans 6,753,260 4%
9 Straws/Stirrers 6,263,453 4%

10 Rope 3,251,948 2%
Top 10 Total Debris Items 132,077,087 80%
Source: http://act.oceanconservancy.org/pdf/Marine_Debris_2011_Report_OC.pdf 1 U.S. Environmental Protection Agency, “Report to Congress: Impacts and Control of Combined Sewer Overflows and Sanitary Sewer Overflows” August 26, 2004, (EPA Publication 833-R-04-001), http://cfpub.epa.gov/npdes/cso/cpolicy_report2004.cfm

From the collected data, much of plastic marine debris is micro in size. There are four main size categories used to classify marine debris: mega-debris (>100 mm diameter); macro-debris (20-100 mm diameter); meso-debris (5-20 mm diameter); and micro-debris (0.3-5 mm diameter). Plastic micro-debris can be subcategorized into primary and secondary micro-plastics. Primary micro-plastics are intentionally made to be that size, such as ‘scrubbing beads’ in personal care products. Secondary microplastics are the result of the fragmentation of larger plastic products, such as packaging, into smaller pieces, as shown in the photo below.

Photo: R. Morier

Industrial facilities can contribute to the marine debris problem when waste items generated by industrial processes, including industrial scraps and packaging material, are improperly disposed or finished products are lost during transportation. Another common type of marine debris generated from industrial facilities is plastic resin pellets. Plastic resin pellets, or pre-production plastic pellets, which are small spherical particles, are the raw material form of most plastic resins. Plastic resin pellets are normally contained from their creation through processing into a plastic product, but they may be inadvertently released into the marine environment.

WHAT ARE THE INDUSTRY-LED SOLUTIONS?

Industry is taking initiative in addressing the problem with marine litter from plastic pellets through the Operation Clean Sweep® (OCS) program. OCS provides guidelines to help operations managers in the plastic industry reduce accidental loss of pellets from processing facilities into the environment. There continues to be global involvement of companies that have implemented practices for zero pellet loss with the OCS program. The OCS manual and a list of partners that have taken the OCS pledge can be found here: http://www.opcleansweep.org/ Operation Clean Sweep® is one of more than 140 projects planned, underway or completed since the Declaration of the Global Plastics Associations for Solutions on Marine Litter was established in March 2011. The projects vary widely, ranging from beach clean ups, global research, expansion of plastics recycling to education campaigns. The Declaration is a result of the Honolulu Strategy where committed stakeholders gathered at the International Marine Debris Conference hosted by NOAA and UNEP to establish a global, results-oriented framework of action with the overarching goal to reduce impacts of marine debris over the next 10 years. Global leaders from plastics organizations signed the Declaration to combat marine litter through prevention and management. It represents six commitments that focus on education, research, public policy, sharing best practices, plastics recycling/recovery and plastic pellet containment. Since December 2012, 58 associations representing 34 countries have signed the Declaration. The Declaration and list of signatories can be found at: www.marinelittersolutions.com/who-we-are/jointdeclaration.aspx

EFFORTS FROM PAC NEXT

In December 2013, the Canadian Plastics Industry Association (CPIA), Society of the Plastics Industry (SPI) and the American Chemistry Council (ACC) welcomed PAC as the first supporter member of Operation Clean Sweep®. The board of directors of PAC and the leaders of the PAC NEXT initiative signed a Memorandum of Understanding to help promote this important initiative and to ensure members are engaged in resin pellet handling by joining the OCS program.

Read the full press release here: http://www.pac.ca/index.php/ePromos/pac0501_cpia_press_release In effort to promote education on this important issue, PAC NEXT first hosted a webinar on this topic on February 7, 2013 with speakers from CPIA, SPI and ACC. On February 26, 2014, PAC NEXT sponsored the Finding Solutions for Marine Litter webinar featuring speakers from CPIA, Ocean Conservancy, Natural Resources Defense Council (NRDC) and Method in partnership with Industry Intelligence. These webinars were targeted for professionals in the packaging, sustainability and consumer packaging goods industries to create awareness and learn what industry leaders are doing to address issues related to marine litter and debris. The transcript for the latest webinar can be requested here: http://www.i2live.net/finding-solutions-for-marine-debris/

LEARN MORE ABOUT OPERATION CLEAN SWEEP®

Do your part to protect environmental quality by preventing pellet litter while saving money through increased operational efficiency. Operation Clean Sweep® is an international program designed to prevent pellet loss and the introduction of pellets to the marine environment. Register and join the 213 North American companies who have made the commitment to reduce pellet loss in their operations! To learn more and to register online visit: www.plastics.ca/ocs/OCSpledge (Canadian Program) www.opcleansweep.org/Pledge (US program)

HELPFUL LINKS

The Declaration of Global Plastics Associations for Solutions on Marine Litter
http://www.marinelittersolutions.com
Progress Report:
http://www.marinelittersolutions.com/cust/documentrequest.aspx?docid=55971
National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program
http://marinedebris.noaa.gov/marinedebris101
United States Environmental Protection Agency (U.S. EPA) on Marine Debris
http://water.epa.gov/type/oceb/marinedebris/index.cfm
UNEP & NOAA's International Marine Debris Conference The Honolulu Commitment:
http://5imdc.wordpress.com/about/commitment/
The Honolulu Strategy: http://5imdc.wordpress.com/about/honolulustrategy/
American Chemistry Council (ACC) http://www.americanchemistry.com/

Canadian Plastics Industry Association (CPIA)
http://www.plastics.ca/EnvironmentalSustainability/marinelitter/index.php
Society of Plastics Industry (SPI) http://www.plasticsindustry.org/
Ocean Conservancy 2011 Marine Debris Report
http://act.oceanconservancy.org/pdf/Marine_Debris_2011_Report_OC.pdf
INCPEN Marine Litter Factsheet
http://www.incpen.org/displayarticle.asp?a=791&c=2
Plastic Debris in the California Marine Ecosystem: A Summary of Current Research, Solution Strategies and Data Gaps. 2011. C. Stevenson, University of Southern California Sea Grant. Synthetic Report. California Ocean Science Trust, Oakland, CA. http://calost.org/pdf/science-initiatives/marine%20debris/Plastic%20Report_10-4-11.pdf
Plastic Pollution Research http://5gyres.org/see_global_research/

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Disclaimer
This document was supported by the PAC NEXT Leadership Council consisting of member volunteers with packaging, materials management and policy experience from across the public and private sectors. The conclusions and views expressed in this document do not necessarily reflect the views of every PAC NEXT Member Company or Affiliate.

PACKAGING CONSORTIUM

Alison Ramnarine

Has successfully completed the
Ultimate Packaging Optimization Course

James Downham
President & CEO
PAC, The Packaging Consortium

April 22, 2014
Date